

# Legal Issues

## RTOGov: Exploring Links Between Market Decision-Making Processes and Outcomes

Kate Konschnik

**Who makes decisions about the electricity that powers your home and business? How does that differ from region to region? Do those differences impact real-world outcomes like price, customer choice, air quality, and innovation?**

Before the 1990s, most homes and businesses in the United States had one choice for electricity—a single electric utility with the monopoly franchise in their state or region. That utility owned most of the power plants generating its electricity, the long-distance wires transporting that power, and the local distribution lines and poles. But following the deregulation and restructuring of the telecommunications and railroad industries, Congress directed the Federal Energy Regulatory Commission (FERC) to introduce competition in the electricity sector.

Initially, FERC required monopoly utilities to open their transmission lines for use by third parties.<sup>1</sup> Then, FERC began to urge the formation of Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) to take control of incumbent utility transmission lines and manage them over larger geographic areas while running competitive auctions for the wholesale sale of electricity. Today, RTOs and ISOs are nonprofit entities

<sup>1</sup> Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities, [FERC Order 888](#), 75 FERC ¶ 61,080 (April 24, 1996).

regulated by FERC as “public utilities” under the Federal Power Act.<sup>2</sup>

Proponents believed that competitive markets would reduce the market influence of individual power suppliers and promote efficient and reliable electric service.<sup>3</sup> “Effective wholesale competition” would also encourage “new entry and innovation.”<sup>4</sup>

“Effective wholesale competition protects consumers by providing more supply options, encouraging new entry and innovation, spurring deployment of new technologies, promoting demand response and energy efficiency, improving operating performance, exerting downward pressure on costs, and shifting risk away from consumers.” – FERC Order 719

<sup>2</sup> With one exception among the seven existing RTOs/ISOs—the Electric Reliability Council of Texas is regulated by the Texas Public Utility Commission.

<sup>3</sup> U.S. Government Accountability Office, [Electric Restructuring: FERC Could Take Additional Steps to Analyze Regional Transmission Organizations’ Benefits and Performance](#), GAO-08-987 (Sept. 2008).

<sup>4</sup> Wholesale Competition in Regions with Organized Electric Markets, [FERC Order 719](#), 125 FERC ¶ 61,071 (Oct. 17, 2008).

### Author Affiliation

Kate Konschnik is the Director of the Climate and Energy Program at the Nicholas Institute for Environmental Policy Solutions.

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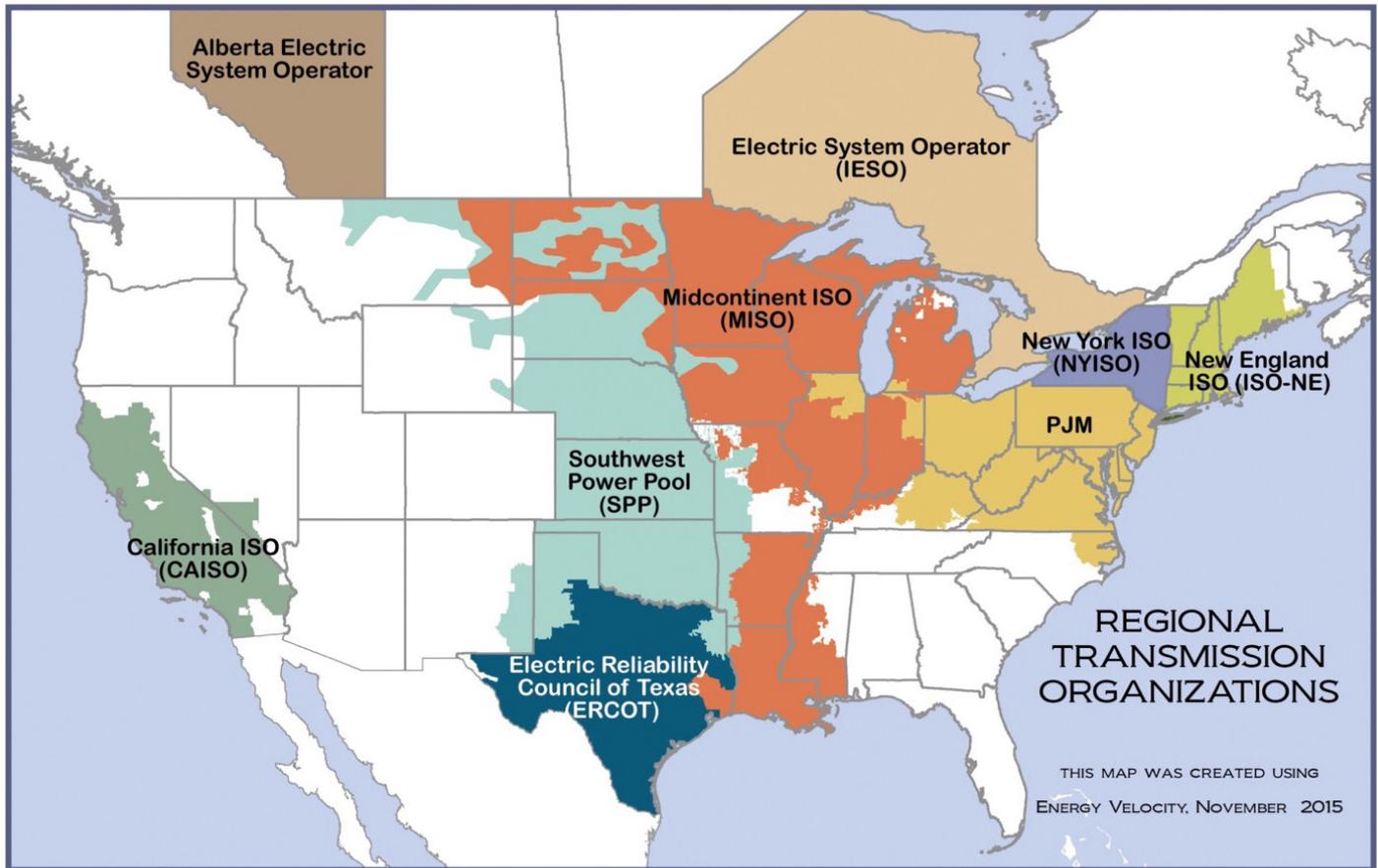
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Notably, FERC did not require the creation of RTOs/ISOs. In fact, many utilities still operate outside of competitive markets, particularly in parts of the Southeast, the Inter-Mountain West, and the Pacific Northwest. Even where markets do exist, FERC never specified the form they must take. Each RTO/ISO writes its own market rules and self-governs with different levels and types of stakeholder engagement. Stakeholders might—or might not—include states, generators, demand response and energy storage providers, consumer groups, large energy users, and environmental groups.

RTOs and ISOs now serve about two-thirds of electricity customers in the United States (Fig. 1). These entities oversee energy markets as well as markets for capacity (future energy) and ancillary services (attributes that support reliability). Therefore, by accident of where you live or work, decision making around the provisioning of electricity may sit with state regulators only or with states and competitive markets, may involve different stakeholders, may be centralized or more diffuse, and may result in different costs, choices, and environmental impacts.

**Figure 1. Map of RTOs/ISOs, which now serve two-thirds of all U.S. electricity demand.**



Source: FERC

These decision-making processes are largely invisible to us. And yet, for years market stakeholders have argued that RTO governance has real implications for the type of power generated in each region and the price we pay for it. Even as they acknowledge the overall benefits of restructured wholesale power markets, stakeholders raise concerns about a lack of access and low visibility into the decisions that result in new market rules.<sup>5</sup>

<sup>5</sup> FERC Order 719 (summarizing stakeholder comments); GAO-08-987 (reporting on stakeholder interviews); Stakeholder letter to the PJM Board of Managers (Feb. 9, 2018); NY Regulators Call on FERC to Exempt Energy Storage from NYISO’s Mitigation Measures, Utility Dive (Aug. 12, 2019).

The clash of ideas is central to competition but also suggests points of tension—and places to improve markets. In fact, alongside their complaints, stakeholders have suggested reforms, including FERC oversight of RTO/ISO budgets;<sup>6</sup> direct stakeholder access to RTO/ISO boards; customer satisfaction surveys; evenly divided industry sector representation; disclosure of reasons when an RTO/ISO board deviates from a consensus position of stakeholders; and periodic reviews of decision-making processes.<sup>7</sup>

The last two decades have upended settled expectations about electricity. Natural gas and renewables are now cheaper to build and operate than coal in many parts of the country. New technologies and market actors have exploded on the scene. Stakeholder complaints may reflect legitimate growing pains, as new players run headlong into RTO governance styles and voting structures developed when generation options were narrower and market participants fewer. This potential power imbalance falls in favor of incumbent generation and transmission-owning stakeholders who rely more heavily on nonrenewable fossil fuels. In turn, if markets do not deliver cleaner power, states and large energy consumers may pursue out-of-market policies to support their preferred generation.

Since the late 1980s, FERC has relied on markets to set “just and reasonable” rates. Moreover, FERC has pointed to RTO/ISO stakeholder processes to justify its deference to proposed market rule (tariff) revisions.<sup>8</sup> The reliance on markets combined with FERC’s deference underscores the critical importance of RTO stakeholder processes to market rules—and we propose, market outcomes.

For nearly 20 years, the United States has been running a grand experiment in the power sector, pursuing different models of electricity regulation in different regions of the country. We have diversity in stakeholder participation and decision-making processes. We also have diversity in electricity pricing, carbon intensity, and receptivity to new goods and services. Are there links between process and outcome? And if so, are there governance best practices that would achieve some consensus-based “good” market results?

“Electricity markets are designed markets. They did not emerge from an unorganized marketplace.”  
– Peter Cramton, “Electricity Market Design” (2017)

There is often talk about whether our electricity laws, from state utility commission authorities to the Federal Power Act, should be adapted to match new circumstances. We should ask the same of our markets.



FERC has set generic minimum standards for RTOs, including a requirement for a nondiscriminatory governance structure.<sup>9</sup> In 2008, FERC set forth four additional principles for stakeholder engagement: inclusiveness, fairness in balancing diverse interests, representation of minority positions, and ongoing responsiveness.<sup>10</sup> While this broad-based, principles-driven approach has allowed RTOs to tailor governance to meet their region’s specific circumstances, it may be time to evaluate these processes for their impact on broader market outcomes.

To be sure, FERC has weighed in periodically to ensure market access for emergent market actors and products; for instance, in Order 719 (directing RTO/ISOs to accept bids from demand response resources and eliminate other barriers) and Order 841 (directing RTO/ISOs to eliminate barriers to participation by energy storage providers). But this is a piecemeal regulatory approach to enabling competition. Might changes to the RTO/ISO decision-making structures absorb change and promote innovation more organically?

<sup>6</sup> In response to this recommendation, FERC submitted performance metrics for RTOs/ISOs to Congress in 2011. See FERC, [Performance Metrics for Independent System Operators and Regional Transmission Organizations: A Report to Congress in Response to Recommendations of the U.S. Government Accountability Office](#) (April 2011).

<sup>7</sup> (FERC Order 719; GAO-08-987).

<sup>8</sup> See, e.g., [FERC Order Rejecting \[Southwest Power Pool\] Tariff Revisions](#), 152 FERC ¶ 61,226 (Sept. 22, 2015).

<sup>9</sup> FERC Order 888; Regional Transmission Organizations, [FERC Order 2000](#), 89 FERC ¶ 61,285 (Dec. 20, 1999).

<sup>10</sup> FERC Order 719.

The RTOGov project seeks to explore the links between decision-making processes and outcomes in our power markets. How does governance differ across RTOs/ISOs? Are there correlations to be made between these differences and divergent market features? Is there a way to map alternative market outcomes, based on modest changes to stakeholder voting eligibility or the power to propose reforms? For regions of the country contemplating new competitive electricity markets (or expansion of existing markets) what governance features should be adopted or adapted to meet their needs? And finally, is it time for FERC to revisit RTO/ISO governance principles, or provide more direction, to build on lessons learned over 20 years?

Led by researchers at Duke University and funded through a generous grant from the Alfred P. Sloan Foundation, RTOGov is a growing network of researchers exploring the most important decision-making bodies never heard of in the United States. Scholars from institutions such as Boise State, Ohio State, Penn State, Dartmouth, Vermont Law School, and the Colorado School of Mines will penetrate these complex issues and identify best practices to guide internal market governance dialogues as well as FERC oversight. Most of all, RTOGov will test the theory that the RTO decision-making process is not simply abstract formalities, but a powerful influence on electricity market outcomes—and a critical tool, if designed and wielded effectively, for harnessing market forces to deliver affordable, reliable, innovative, and increasingly clean power to America.

## RTOGOV CORE RESEARCHERS

**Seth Blumsack**, PhD, Professor, Pennsylvania State University's John and Willie Leone Family Department of Energy and Mineral Engineering, and School of International Affairs

**Jennifer Chen**, PhD/JD, Senior Counsel, Duke University's Nicholas Institute

**Lincoln Davies**, JD, Dean & Frank R. Strong Chair in Law, Ohio State Law School

**Kate Konschnik**, JD, Director, Climate & Energy Program, Duke University's Nicholas Institute

**Stephanie Lenhart**, PhD, Assistant Research Professor, Boise State School of Public Service

**Brian Murray**, PhD, Research Professor, Duke Nicholas School for the Environment, & Director, Duke University's Energy Initiative



**BOISE STATE  
UNIVERSITY**



**THE OHIO STATE UNIVERSITY**  
MORITZ COLLEGE OF LAW



John and Willie Leone Family  
**Department of Energy and  
Mineral Engineering**

# MARKETS, EXTERNALITIES, AND THE FEDERAL POWER ACT: THE FEDERAL ENERGY REGULATORY COMMISSION’S AUTHORITY TO PRICE CARBON DIOXIDE EMISSIONS

BETHANY A. DAVIS NOLL AND BURCIN UNEL\*

*Carbon dioxide (CO<sub>2</sub>) emissions impose a significant cost on society by contributing to climate change. The electricity sector is a major source of these emissions, yet their external cost is not fully reflected in electricity rates, and the market outcomes thus do not adjust to reflect those true costs—a classic market failure. This leads to emissions that are higher than optimal. Under the Federal Power Act (FPA), the Federal Energy Regulatory Commission (FERC) is tasked with ensuring that interstate wholesale electricity rates are “just and reasonable.” Given the severity of the damages caused by the failure to internalize the CO<sub>2</sub> externality, it is crucial to understand whether the external cost of that negative externality can be included in wholesale rates.*

*This Article examines how FERC has embraced market efficiency as the key tool for ensuring just and reasonable rates and has addressed all of the standard market failures that would otherwise distort the efficiency of prices: market power, asymmetric information, public goods, and externalities. The Article then shows that any economically rational effort to achieve an efficient market must attempt to address the external cost of CO<sub>2</sub> emissions as well. This Article argues that, from an economic perspective, FERC’s authority to pursue market efficiency should extend to either approving utility plans to internalize those*

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\* Bethany A. Davis Noll, Litigation Director, Institute for Policy Integrity, New York University School of Law (bethany.davisnoll@nyu.edu); Burcin Unel, Ph.D., Energy Policy Director, Institute of Policy Integrity, New York University School of Law (burcin.unel@nyu.edu). We would like to thank Norman Bay, Matthew Christiansen, Miles Farmer, Denise Grab, Kate Konschnik, Max Minzner, Michael Panfil, Richard L. Revesz, Avi Zevin, as well as participants of the annual meeting of the Society for Environmental Law and Economics, and the Association of American Law Schools Section on Natural Resources & Energy Law for their insightful comments. All errors are our own. Alan Masinter and Clay Venetis provided excellent research assistance.

*external costs or to set a carbon price, just as it extends to other market failures.*

*FERC's authority in this area has its limits. Under the FPA's just and reasonable mandate, FERC has authority to address only the market failures that are directly related to wholesale electricity rates. In addition, FERC cannot act without evidentiary support or act directly to interfere in state-level generation mix choices. But seen from an economic perspective, there should be no impediment to FERC taking action to internalize the direct costs of greenhouse gas emissions—whether through approval of a utility's plan to take those costs into account or through a market correction issued by FERC itself.*

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## INTRODUCTION

One of the most important issues facing policymakers today is the need to address the well-recognized climate damages caused by emissions of greenhouse gases such as carbon dioxide (CO<sub>2</sub>).<sup>1</sup> Electricity generation in the United States is the primary source of such emissions, accounting for 1,744 million tons in 2017.<sup>2</sup> Despite the severity of the problem, FERC, which regulates the interstate transmission and wholesale electricity markets, has avoided addressing the issue.

More recently, however, electricity market operators have begun considering plans to address CO<sub>2</sub> emissions in their wholesale operations.<sup>3</sup> New York’s wholesale electricity market operator (NYISO) is studying the implementation of a carbon price, which would be designed to harmonize New York’s carbon emissions reduction goals with the wholesale markets.<sup>4</sup> PJM Interconnection L.L.C. (PJM)—a Regional Transmission Organization (RTO) that coordinates the movement of wholesale electricity in all or parts of thirteen states and the District of Columbia—has put out a white paper that explores “two potential

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<sup>1</sup> See *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007) (“The harms associated with climate change are serious and well recognized.”); see also Carbon Pollution Emission Guidelines for Existing Stationary Sources, 80 Fed. Reg. 64,662, 64,686–88 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60) (describing harms of climate change).

<sup>2</sup> See *Frequently Asked Questions*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/tools/faqs/faq.php?id=77&t=11> (last visited Aug. 23, 2018).

<sup>3</sup> See Shelley Welton, *Electricity Markets and the Social Project of Decarbonization*, 118 COLUM. L. REV. 1067, 1071 (2018) (discussing recent attention being paid to using electricity markets to decarbonize).

<sup>4</sup> See N.Y. INDEP. SYS. OPERATOR, CARBON PRICING DRAFT RECOMMENDATIONS (2018), [http://www.nyiso.com/public/committees/documents.jsp?com=bic\\_miwg\\_ipptf&directory=2018-08-06](http://www.nyiso.com/public/committees/documents.jsp?com=bic_miwg_ipptf&directory=2018-08-06); SAMUEL A. NEWELL ET AL., THE BRATTLE GRP., PRICING CARBON INTO NYISO’S WHOLESALE ENERGY MARKET TO SUPPORT NEW YORK’S DECARBONIZATION GOALS iv–xi (2017), <https://www.nyiso.com/documents/20142/2244202/2017-Brattle-NY-Carbon-Study.pdf/156a738d-e471-ccad-e146-07ac593ec0c3> [hereinafter BRATTLE PRICING CARBON REPORT].

carbon-pricing frameworks” that could be used to harmonize PJM’s wholesale market with state goals that seek to promote renewable energy.<sup>5</sup>

FERC’s failure thus far to address CO<sub>2</sub> emissions may be explained by the fact that FERC has historically shied away from taking environmental considerations into account in ratemaking.<sup>6</sup> But CO<sub>2</sub> emissions are not just an environmental consideration; they are a prime example of what economists call an “externality,” a type of market failure that hinders the efficiency of competitive markets. Some market operators are considering implementing carbon pricing, which incorporates the price of CO<sub>2</sub> emissions into wholesale markets to correct that failure. In the absence of a nation- and economy-wide carbon tax, pricing CO<sub>2</sub> emissions at that wholesale level would be the most economically efficient way of correcting the CO<sub>2</sub> externality in the electricity markets.<sup>7</sup> Therefore, the question of whether FERC has authority to address the external cost of CO<sub>2</sub> emissions in order to achieve economically efficient wholesale energy markets is an increasingly important question.

This Article uses an economic framework to show that regulating carbon pricing fits within FERC’s mandate to ensure just and reasonable rates. For the past several decades, FERC has used market efficiency to achieve just and reasonable rates.<sup>8</sup> And as an analysis of market efficiency will show, addressing the harms caused by greenhouse gas emissions in the regulation of interstate wholesale electricity generation should fit within that mandate to ensure “just and reasonable” rates.

The FPA gives FERC “the authority—and, indeed, the duty—to ensure that rules or practices ‘affecting’ wholesale rates are just and reasonable” and not unduly discriminatory.<sup>9</sup> Throughout its history, FERC achieved this goal by using multiple regulatory paradigms. More recently, to fulfill its duty of ensuring just and

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<sup>5</sup> PJM, ADVANCING ZERO EMISSIONS OBJECTIVES THROUGH PJM’S ENERGY MARKETS: A REVIEW OF CARBON-PRICING FRAMEWORKS (2017), <https://pjm.com/~media/library/reports-notice/special-reports/20170502-advancing-zero-emission-objectives-through-pjms-energy-markets.ashx>.

<sup>6</sup> See, e.g., *Grand Council of the Crees v. Fed. Energy Regulatory Comm’n*, 198 F.3d 950, 957 (D.C. Cir. 2000).

<sup>7</sup> See *infra* Section III.

<sup>8</sup> See *infra* Section II.B.

<sup>9</sup> *Fed. Energy Regulatory Comm’n v. Elec. Power Supply Ass’n*, 136 S. Ct. 760, 773–74 (2016); see also 16 U.S.C. § 824d(a) (2012).

reasonable rates, FERC has embraced market-based solutions aimed at promoting economic efficiency and increasing competition.<sup>10</sup> For example, FERC has approved the use of market-based rates for electricity sales, in order to harness efficiencies that flow from market solutions.<sup>11</sup>

Economists indeed assume that perfectly competitive markets maximize the total net benefit of market participants and therefore are efficient.<sup>12</sup> When there is perfect competition, market prices equal the social marginal cost and they are a signal for efficient allocation of society's resources.<sup>13</sup> But perfectly competitive, and thus efficient, markets rarely exist. Most markets, including electricity markets, are marred by what economists call "market failures."<sup>14</sup> When there are market failures, prices no longer reflect the social marginal cost and the resulting allocation of resources in the economy is no longer efficient.<sup>15</sup> In those circumstances, regulatory intervention is needed.<sup>16</sup>

While different economists use different typologies, market failures are grouped broadly into four different categories: (1) market power, (2) asymmetric information, (3) public goods, and (4) externalities. Market power arises when sellers (or buyers) have power to increase the market price above (or below) competitive levels.<sup>17</sup> Information asymmetry exists when buyers or sellers in a market have an information advantage that they can exploit to their benefit.<sup>18</sup> Public goods are goods such as security

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<sup>10</sup> See *Elec. Power Supply Ass'n*, 136 S. Ct. at 768; Grid Reliability & Resilience Pricing, 162 FERC ¶ 61,012, ¶ 9 (2018) ("[T]he Commission has largely adopted a pro-market regulatory model, wherein the Commission relies on competition in approving market rules and procedures that, in turn, determine the prices for the energy, ancillary services, and capacity products (where applicable).").

<sup>11</sup> See, e.g., *Progress Power Mktg., Inc.*, 76 FERC ¶ 61,155 (1996).

<sup>12</sup> See ROBERT S. PINDYCK & DANIEL L. RUBINFELD, *MICROECONOMICS* 611–13 (7th ed. 2009) (explaining that competitive markets will achieve an efficient allocation of resources).

<sup>13</sup> See *id.*

<sup>14</sup> See *id.*

<sup>15</sup> See *id.* (explaining how each type of market failure leads to economic inefficiency).

<sup>16</sup> PAUL KRUGMAN & ROBIN WELLS, *MICROECONOMICS* 12–16 (2d ed. 2009).

<sup>17</sup> See *infra* Section II.B.3.a.

<sup>18</sup> See *infra* Section II.B.3.b.

or reliability, which are typically underprovided by markets.<sup>19</sup> Externalities are costs or benefits of market transactions that are incurred by third parties and thus not considered by market participants.<sup>20</sup> When any of these market failures exist, market outcomes are no longer economically efficient.

Where FERC is relying on economic efficiency and competition in order to ensure just and reasonable rates, a wholesale market with market failures would undermine that goal. In order to move closer to an efficient market and just and reasonable rates, FERC must intervene and correct these failures. Indeed, FERC has recognized that each type of market failure exists in wholesale energy markets and has addressed them under its authority to ensure that wholesale rates are just and reasonable.<sup>21</sup> Courts have upheld FERC's use of market-based mechanisms to ensure just and reasonable rates;<sup>22</sup> conversely, courts have rejected FERC's regulations when FERC has failed to sufficiently address market failures.<sup>23</sup>

Yet for some reason, FERC has still not addressed the CO<sub>2</sub> emissions externality. As a result, because fossil fuel-fired generators do not have to bear the cost of the CO<sub>2</sub> emissions they generate, they can offer their electricity at prices that are lower than the true social marginal cost of producing it, even though consumers will still end up bearing those costs.<sup>24</sup> Consequently, more and dirtier electricity generation will occur than is socially optimal.<sup>25</sup> Using the best available estimate of the monetary value

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<sup>19</sup> See *infra* Section II.B.3.c.

<sup>20</sup> See *infra* Section II.B.3.d; see also KRUGMAN & WELLS, *supra* note 16, at 433–438; Rudy Perkins, *Electricity Deregulation, Environmental Externalities and the Limitations of Price*, 39 B.C. L. REV. 993, 994 (1998).

<sup>21</sup> See *infra* Part II.B.3.

<sup>22</sup> See, e.g., *California ex rel. Lockyer v. Fed. Energy Regulatory Comm'n*, 383 F.3d 1006, 1012 (9th Cir. 2004).

<sup>23</sup> See *Tejas Power Corp. v. Fed. Energy Regulatory Comm'n*, 908 F.2d 998, 1006 (D.C. Cir. 1990) (finding that FERC had not adequately addressed market power concerns in approving a gas pipeline company's proposed charge).

<sup>24</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 613 (discussing similar costs in the context of effluent discharged into a river).

<sup>25</sup> See, e.g., Elesha Simeonov, *Just Not Reasonable: What the FERC's Order on Demand Response Compensation Reveals about the Current Shortfalls in "Just and Reasonable" Rulemaking*, 31 TEMP. J. SCI. TECH. & ENVTL. L. 311, 334 (2012) (explaining that the failure to internalize the costs of pollution effects leads to market transactions that "undervalue the harms in the production of electricity, thereby making it cheaper than optimal"); Perkins, *supra* note 20, at 994, 1033, 1055 (explaining how the failure to internalize the cost of pollution

of the external damages of CO<sub>2</sub> emissions, electricity generation caused up to about \$87.2 billion of external damages in 2017 alone.<sup>26</sup>

In order to achieve economic efficiency in the presence of negative externalities, those externalities need to be fully “internalized.”<sup>27</sup> In other words, the parties to the market transaction must bear the external costs. A market price that reflects the full external cost of carbon emissions would align the transaction with the true social cost of that electricity in a simple and efficient way.<sup>28</sup> As a result, the markets would be efficient and FERC would satisfy its “just and reasonable” mandate.

As this Article shows, viewed from an economic perspective, approving any utility effort to correct the market failure that results from CO<sub>2</sub> emissions would fit within FERC’s effort to ensure an efficient market regardless of its environmental impact.<sup>29</sup> The external cost of CO<sub>2</sub> emissions is directly tied to the social marginal cost of production and, therefore, directly affects the reasonableness of the price for each megawatt-hour of electricity that is generated. To be sure, tangential or indirect externalities are beyond FERC’s authority.<sup>30</sup> For example, authorizing a generator to use market-based rates might affect whether the owner of the generator expands the facility, which might affect a particular bird

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leads to inefficiently high levels of pollution and less-than-optimal energy projects).

<sup>26</sup> This number is calculated using the federal Interagency Working Group’s (“IWG”) Social Cost of Carbon methodology. In 2017, electricity generation in the United States caused 1,744 million tons of CO<sub>2</sub> emissions. See U.S. ENERGY INFO. ADMIN., *supra* note 2. Using the IWG’s estimate of about \$50 per ton in 2017 dollars, that amount of emissions cost society \$87,200,000,000 in 2017 dollars. See INTERAGENCY WORKING GRP. ON SOC. COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: TECHNICAL UPDATE OF THE SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866 16 (2016) [hereinafter TECHNICAL SUPPORT DOCUMENT]; *What is the SCC?*, INST. FOR POLICY INTEGRITY, <https://costofcarbon.org/faq/what-is-the-scc> (last visited Oct. 29, 2018).

<sup>27</sup> See KRUGMAN & WELLS, *supra* note 16, at 438, 445 (quick review side bar).

<sup>28</sup> See Welton, *supra* note 3, at 1104 (collecting sources for the point that “[p]utting a price on carbon is theoretically appealing because of its potential breadth, simplicity, and efficiency”).

<sup>29</sup> While this Article focuses on the external cost of greenhouse gas emissions, these principles would apply to any other pollutant that directly affects the social marginal cost of electricity production.

<sup>30</sup> See Joel B. Eisen, *FERC’s Expansive Authority to Transform the Electric Grid*, 49 U.C. DAVIS L. REV. 1783, 1830 (2016) (explaining the direct versus indirect line).

population.<sup>31</sup> But that type of indirect and tangential externality does not change the social marginal cost of generation and is too remote to vest authority in FERC to address it. In contrast, the CO<sub>2</sub> emissions externality directly affects rates, and any effort to internalize that direct cost at the wholesale market level would also directly affect rates and be within FERC's authority to supervise.<sup>32</sup>

Other authors have previously argued that FERC has authority to address the external cost of emissions.<sup>33</sup> Scholars have said that FERC could allow utilities to address the environmental impact of CO<sub>2</sub> pollution by incorporating state environmental policies into their tariffs;<sup>34</sup> adopt “grid system reliability adders,” upon a finding that reliability would be at risk without more renewable resources, in setting transmission rates;<sup>35</sup> reinterpret the FPA to allow FERC to take “environmental considerations” into account;<sup>36</sup> or use the FPA's direction to consider the “public interest” to address environmental considerations.<sup>37</sup> But existing scholarship has yet to focus on the externality as a market failure and address these external costs in the context of FERC's wide-ranging authority over market failures.

Our Article contributes to the literature on FERC's authority to price CO<sub>2</sub> emissions in wholesale electricity markets in two distinct ways. First, we link the foundation of FERC's authority directly to its “just and reasonable” mandate without having to rely on any state public policy justification. Second, we explain how the standard arguments opposing FERC's authority to price CO<sub>2</sub>

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<sup>31</sup> See *Grand Council of the Crees v. Fed. Energy Regulatory Comm'n*, 198 F.3d 950, 954 (D.C. Cir. 2000).

<sup>32</sup> See *Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 774 (2016) (explaining the “directly affects” test).

<sup>33</sup> See, e.g., Eisen, *supra* note 30, at 1788 (arguing that FERC has authority to address externalities because they directly affect rates).

<sup>34</sup> See Ari Peskoe, *Easing Jurisdictional Tensions by Integrating Public Policy in Wholesale Electricity Markets*, 38 ENERGY L.J. 1, 2 (2017).

<sup>35</sup> Jim Rossi, *Carbon Taxation by Regulation*, 102 MINN. L. REV. 277, 331 (2018).

<sup>36</sup> Christopher J. Bateman & James T. B. Tripp, *Toward Greener FERC Regulation of the Power Industry*, 38 HARV. ENVTL. L. REV. 275, 329 (2014).

<sup>37</sup> See STEVEN WEISSMAN & ROMANY WEBB, BERKELEY SCH. OF LAW CTR. FOR LAW, ENERGY & THE ENV'T, ADDRESSING CLIMATE CHANGE WITHOUT LEGISLATION 1, 4 (2014), [https://www.law.berkeley.edu/files/CLEE/FERC\\_Report\\_FINAL.pdf](https://www.law.berkeley.edu/files/CLEE/FERC_Report_FINAL.pdf).

emissions<sup>38</sup> miss the mark, because they are focused on FERC's authority to act on environmental issues rather than on FERC's authority to correct market failures. We build on existing literature addressing practices that directly affect rates<sup>39</sup> to show how the externality created by CO<sub>2</sub> emissions has a direct impact on social marginal cost and thus directly affects the efficiency of rates. To accomplish this task, we provide a comprehensive economic framework and show that the CO<sub>2</sub> externality is a traditional market failure that must be corrected in order to ensure an efficient market.

Even though FERC is not an "environmental" regulator, FERC has longstanding authority to fix this market failure under its traditional role as an "economic" regulator. Consideration of CO<sub>2</sub> emissions is not simply an environmental concern but rather a core market concern that is integral to a functional and efficient market. Socially optimal economic regulation cannot be achieved without consideration of the external costs of CO<sub>2</sub> emissions that are directly related to electricity generation.

This is not to say that FERC's authority to address CO<sub>2</sub> emissions is boundless. FERC must assemble a record to support its actions and demonstrate that its actions truly address market failures and that the resulting rates are, therefore, just and reasonable.<sup>40</sup> Any carbon price must be guided by sound economic principles and must be based on the external damages caused by CO<sub>2</sub> emissions.

In addition, FERC must respect state authority over the generation mix in any effort to address externalities. Without clear congressional authorization, FERC may not use its authority to intrude into an area of longstanding state control. Thus, attempting to use its authority to directly undermine state public policy goals directly would be unlawful.

The remainder of the Article is organized as follows. Part I provides an overview of the statutory and regulatory backdrop for

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<sup>38</sup> See, e.g., John Moot, *Subsidies, Climate Change, Electric Markets and the FERC*, 35 ENERGY L.J. 345, 348 (2014) (arguing that FERC does not have authority to "pick winners and losers by choosing sides in the climate change debate").

<sup>39</sup> See, e.g., Eisen, *supra* note 30, at 1835–43.

<sup>40</sup> See S.C. Pub. Serv. Auth. v. Fed. Energy Regulatory Comm'n, 762 F.3d 41, 54 (D.C. Cir. 2014) (describing the evidentiary standard that FERC must meet).

FERC's market regulation, as well as a brief explanation of economic efficiency and perfectly competitive markets. Part II offers an overview of market failures and provides examples of FERC's regulation of them. Part III explains how externalities are a common market failure that renders rates unjust and unreasonable, and outlines FERC's authority to address them. Part IV discusses the limits on FERC's authority in this area.

## I. STATUTORY AND ECONOMIC FRAMEWORK

In this Part, we first review the statutory framework of the FPA. Then, we discuss the basic economic principles related to perfectly competitive markets.

### A. *The Federal Power Act*

Early on, states and localities regulated most electricity generation, transmission, and electricity distribution.<sup>41</sup> But in the 1920s, the Supreme Court held that the Constitution bars states from regulating interstate electricity transactions, leaving any interstate transactions unregulated.<sup>42</sup> Congress responded in the 1930s by passing the FPA and creating FERC's predecessor agency, the Federal Power Commission, to regulate wholesale interstate electricity transactions.<sup>43</sup>

Under the FPA, the Federal Power Commission (now FERC) regulates two significant features of electricity rates. First, FERC must ensure that rates are "just and reasonable" and prevent utilities from showing undue prejudice or discrimination in the transmission or sale of wholesale electricity.<sup>44</sup> Second, FERC is

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<sup>41</sup> See *Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 767 (2016).

<sup>42</sup> See *Pub. Util. Comm'n of R.I. v. Attleboro Steam & Elec. Co.*, 273 U.S. 83, 89 (1927).

<sup>43</sup> See *New York v. Fed. Energy Regulatory Comm'n*, 535 U.S. 1, 6 (2002). We use the terms wholesale and interstate interchangeably to refer to electricity sales that are made over an interstate grid and are thus subject to FERC's jurisdiction. Wholesale markets are considered interstate markets because wholesale electricity sales generally make use of the electricity grid, which is almost always connected to interstate electricity lines. See *Fed. Power Comm'n v. Fla. Power & Light Co.*, 404 U.S. 453, 469 (1972) (deferring to FERC's judgment that in-state sales were subject to federal jurisdiction because the utility purchasing the power made use of transmission lines that were ultimately connected to an interstate grid).

<sup>44</sup> 16 U.S.C. § 824d(a)–(b) (2012); § 824e(a).

charged with performing this function with respect to rates themselves as well as the rules and practices directly affecting rates.<sup>45</sup> This section will discuss these two features of FERC’s authority in more detail.

### 1. *Just and Reasonable and Undue Discrimination*

Under the FPA, FERC must ensure that the rates that “public utilities”—generators or transmission owners trading in wholesale electricity<sup>46</sup>—charge on the interstate market are just and reasonable.<sup>47</sup> In addition, FERC is tasked with preventing utilities from showing any market participant “undue preference or advantage” when setting rates, and with correcting any undue discrimination in the market.<sup>48</sup>

FERC’s authority under these provisions allows it to adjust rates within a “range of reasonableness” and to respond to anticompetitive behavior or market imperfections.<sup>49</sup> It also allows FERC to remedy “discrimination in wholesale market operations.”<sup>50</sup> But while FERC is charged with safeguarding against undue discrimination, “dissimilar treatment of dissimilar resources does not constitute undue discrimination.”<sup>51</sup> Only “similarly situated” resources should expect similar treatment.<sup>52</sup>

FERC performs its functions under sections 205 and 206 of the FPA. Under section 205, it reviews and approves utility tariffs showing the “rates and charges . . . and the classifications, practices, and regulations affecting such rates and charges.”<sup>53</sup> Under section 206, FERC has authority to investigate whether a “rule, regulation, practice, or contract affecting such rate, charge,

<sup>45</sup> See § 824d(b); § 824e(a).

<sup>46</sup> § 824(e).

<sup>47</sup> § 824d(a).

<sup>48</sup> *Id.*; § 824(e).

<sup>49</sup> See *Ill. Cities of Bethany v. Fed. Energy Regulatory Comm’n*, 670 F.2d 187, 191 (D.C. Cir. 1981).

<sup>50</sup> See Eisen, *supra* note 30, at 1817; see also *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*, 61 Fed. Reg. 21,540, 21,560 (May 10, 1996) (using this authority to remedy anticompetitive effects on an industry-wide basis).

<sup>51</sup> *Cal. Indep. Sys. Operator Corp.*, 119 FERC ¶ 61,061, ¶ 70 (2007).

<sup>52</sup> *Black Oak Energy, LLC v. Fed. Energy Regulatory Comm’n*, 725 F.3d 230, 239 (D.C. Cir. 2013) (“FERC reasonably determined that the virtual marketers are not similarly situated to the rest of PJM’s market participants.”).

<sup>53</sup> 16 U.S.C. § 824d(c).

or classification is unjust, unreasonable, unduly discriminatory or preferential” and, if FERC finds in the affirmative, to impose a rate that is just and reasonable in its place.<sup>54</sup>

Under either section, FERC’s “findings must be supported by ‘substantial evidence.’”<sup>55</sup> The substantial evidence test requires FERC to “specify the evidence on which it relied and . . . explain how that evidence support[s] the conclusion it reached.”<sup>56</sup> FERC is not required to point to empirical evidence to support all of its findings; it may be sufficient to support them with “reasonable economic propositions.”<sup>57</sup> For example, FERC does not need to prove through economic data or experiments that gravity exists or that competition helps lower prices.<sup>58</sup>

Most of FERC’s activity occurs under section 205. Under that section, FERC reviews rates proposed by utilities, rather than setting the rates itself under section 206.<sup>59</sup> In reviewing section 205 submissions, FERC has a “passive and reactive role” and will approve a tariff if it is just and reasonable.<sup>60</sup> FERC is authorized to “accept or reject” a proposal<sup>61</sup> and may not impose a modification that would result in a different rate scheme, even if the utility agreed to the modification.<sup>62</sup> In reviewing utilities’ submissions, FERC is not required to follow any specific rate-setting formula.<sup>63</sup>

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<sup>54</sup> § 824e(a); *see also* Atlantic City Elec. Co. v. Fed. Energy Regulatory Comm’n, 295 F.3d 1, 10 (D.C. Cir. 2002) (“In order to make any change in an existing rate or practice, FERC must first prove that the existing rates or practices are ‘unjust, unreasonable, unduly discriminatory or preferential.’”).

<sup>55</sup> S.C. Pub. Serv. Auth. v. Fed. Energy Regulatory Comm’n, 762 F.3d 41, 65 (D.C. Cir. 2014) (quoting 5 U.S.C. § 706(2)(E)).

<sup>56</sup> *Id.* at 54 (quoting Wis. Gas Co. v. Fed. Energy Regulatory Comm’n, 770 F.2d 1144, 1156 (1985)) (internal quotation marks omitted).

<sup>57</sup> *Id.* at 65.

<sup>58</sup> *See id.*

<sup>59</sup> Metro. Edison Co. v. Pa. Pub. Util. Comm’n, 767 F.3d 335, 369 (3d Cir. 2014).

<sup>60</sup> NRG Power Mktg. v. Fed. Energy Regulatory Comm’n, 862 F.3d 108, 114 (D.C. Cir. 2017); *see also* Atlantic City Elec. v. Fed. Energy Regulatory Comm’n, 295 F.3d 1, 9 (D.C. Cir. 2002).

<sup>61</sup> *NRG Power Mktg.*, 862 F.3d at 114.

<sup>62</sup> *See id.* at 115. Only “‘minor deviations’” from the submission are permissible. *Id.* (quoting W. Res., Inc. v. Fed. Energy Regulatory Comm’n, 9 F.3d 1568, 1579 (D.C. Cir. 1993)).

<sup>63</sup> *See* Maine v. Fed. Energy Regulatory Comm’n, 854 F.3d 9, 20 (D.C. Cir. 2017); *see also* Farmers Union Cent. Exch., Inc. v. Fed. Energy Regulatory Comm’n, 734 F.2d 1486, 1501 (D.C. Cir. 1984).

But it is required to balance the interests of the investor and the consumer.<sup>64</sup>

FERC acts under section 206 as well, though less often. In contrast to its actions under section 205, when FERC is acting under section 206, it has more room to impose practices or rules of its own design, as long as it satisfies a dual burden.<sup>65</sup> FERC must first demonstrate that existing rates are “unjust, unreasonable, unduly discriminatory or preferential.”<sup>66</sup> Second, FERC must show through “substantial evidence that the new rate is just, reasonable and not unduly discriminatory.”<sup>67</sup> Courts show significant deference to FERC’s rate decisions.<sup>68</sup> To overturn FERC’s judgment, a challenger must make a strong showing that the consequences of FERC’s judgment are unjust and unreasonable.<sup>69</sup> Courts look at whether the agency provided a reasoned explanation for the decision, considered competing views, and chose a formula that was supported by the record.<sup>70</sup>

## 2. *Direct Effect on Wholesale Rates*

In pursuing just and reasonable rates and protecting against undue discrimination, FERC has authority to regulate “interstate . . . wholesale rates and the panoply of rules and practices affecting them.”<sup>71</sup> But as the Supreme Court has explained, authority over every rule or practice that affects a wholesale rate would be too expansive.<sup>72</sup> A literal reading of that authority could support the view that FERC has authority over the whole economy, including electricity’s inputs, such as steel, fuel, and labor, as well as markets in anything that influences utilities’

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<sup>64</sup> See *Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty.*, 554 U.S. 527, 532 (2008).

<sup>65</sup> See *Maine*, 854 F.3d at 21.

<sup>66</sup> 16 U.S.C. § 824e(a).

<sup>67</sup> *Ameren Servs. Co. v. Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,205, ¶ 32 (2007).

<sup>68</sup> See *Morgan Stanley Capital Group Inc.*, 554 U.S. at 532.

<sup>69</sup> See *In re Permian Basin Area Rate Cases*, 390 U.S. 747, 767 (1968) (citing *Fed. Power Comm’n v. Hope*, 320 U.S. 591, 602 (1944)).

<sup>70</sup> See *Fed. Energy Regulatory Comm’n v. Elec. Power Supply Ass’n*, 136 S. Ct. 760, 784 (2016).

<sup>71</sup> *Id.* at 773.

<sup>72</sup> See *id.* at 774.

demand.<sup>73</sup> As the Court recognized, Congress could not have meant to give FERC such sweeping authority.<sup>74</sup>

For that reason, the Court adopted a commonsense test that limits FERC's authority to rules or practices that "directly affect the wholesale rate."<sup>75</sup> Under that test, FERC does not have jurisdiction over the market for steel (even if steel is necessary to build transmission lines) or over labor (even if workers are required to generate electricity).<sup>76</sup> Similarly, as the D.C. Circuit held, FERC does not have jurisdiction to direct the California Independent System Operator (CAISO) to alter the structure of its corporate governance.<sup>77</sup> And, as the Supreme Court further held, FERC does not have jurisdiction to address employment discrimination at utilities.<sup>78</sup>

On the other hand, because FERC does have authority over programs that directly affect rates, FERC can order utilities to reward electricity users for reducing demand because those "demand response" programs are "all about reducing wholesale rates."<sup>79</sup> Demand response programs have a direct impact on the rates, because they reduce the need for high-priced generation, thus lowering the wholesale prices.<sup>80</sup> As another example, FERC has authority to require utilities to consider the transmission needs driven by state-level public policy programs, which seek to encourage and promote renewable generation.<sup>81</sup> Transmission planning is within FERC's authority, because the ability to use the

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<sup>73</sup> See *id.*

<sup>74</sup> See *id.*

<sup>75</sup> *Id.* (quotation marks omitted); see also *Transmission Planning & Cost Allocation by Transmission Owning & Operating Pub. Utilities*, 139 FERC ¶ 61,132, ¶ 210 (2012) (FERC has authority "to assess practices that directly affect or are closely related to a public utility's rates."); *Cal. Indep. Sys. Operator Corp. v. Fed. Energy Regulatory Comm'n*, 372 F.3d 395, 403 (D.C. Cir. 2004) (FERC's actions must be addressed to "methods or ways of doing things on the part of the utility that directly affect the rate or are closely related to the rate.").

<sup>76</sup> See *Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 774 (2016); see also Eisen, *supra* note 30, at 1834–43 (discussing four guidelines for ascertaining whether a practice falls within FERC's authority).

<sup>77</sup> See *Cal. Indep. Sys. Operator Corp. v. Fed. Energy Regulatory Comm'n*, 372 F.3d 395, 403 (D.C. Cir. 2004).

<sup>78</sup> See *NAACP v. Fed. Power Comm'n*, 425 U.S. 662, 664 (1976).

<sup>79</sup> *Elec. Power Supply Ass'n*, 136 S. Ct. at 774.

<sup>80</sup> See *id.* at 774–75.

<sup>81</sup> See *Transmission Planning & Cost Allocation*, 139 FERC ¶ 61,938, ¶ 209 (2012) (explaining that agency was requiring utilities to consider transmission needs driven by state-level policies in their "transmission planning processes").

transmission lines has “a direct and discernable effect” on rates.<sup>82</sup> FERC also has authority to order utilities to allow electric storage resources to participate in the energy, capacity, and ancillary markets because energy storage directly affects how much generation is needed on the grid, especially during times of peak demand.<sup>83</sup> As we show below, CO<sub>2</sub> damages similarly directly affect rates, and wholesale market-level programs to price those damages also directly affect rates.

### B. *Markets and Economic Efficiency*

Before discussing FERC’s actions within the statutory framework of promoting an efficient electricity market, it is helpful to review the principles behind economic efficiency and “perfectly competitive” markets. An efficient market is one where “all the opportunities to make some people better off without making other people worse off have been exploited.”<sup>84</sup> If all of those transactions occur, then the total welfare of consumers and producers—the social welfare—is maximized.<sup>85</sup> Furthermore, when such efficiency is achieved in a market, all the resources in that market are allocated to their most productive use.<sup>86</sup>

Basic principles of economics tell us that if markets are what economists call “perfectly competitive,” then they are usually efficient.<sup>87</sup> Generally speaking, a perfectly competitive market has two features: (1) many sellers that can compete to sell their identical goods to many buyers<sup>88</sup> and (2) free entry and exit of firms.<sup>89</sup>

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<sup>82</sup> *Id.*

<sup>83</sup> See Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators, 162 FERC ¶ 61,127, ¶ 1 (2018); Richard L. Revesz & Burcin Unel, *Managing the Future of the Electricity Grid: Energy Storage and Greenhouse Gas Emissions*, 42 HARV. ENVTL. L. REV. 139, 140–41 (2018).

<sup>84</sup> See KRUGMAN & WELLS, *supra* note 16, at 15.

<sup>85</sup> See *id.* at 14–15, 111; PINDYCK & RUBINFELD, *supra* note 12, at 315; STEVEN STOFT, *POWER SYSTEM ECONOMICS: DESIGNING MARKETS FOR ELECTRICITY* 54 (2002); Emily Hammond & David B. Spence, *The Regulatory Contract in the Marketplace*, 69 VAND. L. REV. 141, 169 (2016) (explaining that well-functioning competitive markets will maximize the net benefits for society).

<sup>86</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 597.

<sup>87</sup> See KRUGMAN & WELLS, *supra* note 16, at 111.

<sup>88</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 272.

<sup>89</sup> See *id.*

Many sellers that sell the exact same product helps ensure that each individual seller has a very small market share and thus can have no impact on the price paid by consumers.<sup>90</sup> If sellers try to charge a higher price, consumers will simply turn to the next, cheaper seller. Similarly, when there are many buyers and each buys only a small portion of the output, no individual buyer can affect the market price.<sup>91</sup> In other words, in perfectly competitive markets, both consumers and producers are “price takers,” taking the market price as given when deciding how much to buy or sell instead of trying to change the market price through their production or consumption decisions.<sup>92</sup> Another way of putting it is that when buyers and sellers are price takers, they are “acting competitively.”<sup>93</sup>

The second key feature is free entry and exit. Free entry and exit means that there are no special costs or barriers to firms entering or exiting the market.<sup>94</sup> As a result, firms can enter if they see opportunities to earn profits, or exit if they are no longer earning profits.<sup>95</sup> Without free entry and exit, it is difficult to ensure effective competition. If a new supplier cannot easily enter the market, a firm may be able to raise its price without losing customers. If, however, both buyers and sellers are free to make decisions about consumption and production as well as entry and exit, they can take advantage of opportunities for mutually beneficial trades.<sup>96</sup>

With these features in place, in perfectly competitive markets, there is a single market clearing price that is determined where the supply curve for the product intersects the demand curve—in other words, where supply equals demand.<sup>97</sup> This is known as the equilibrium price, which is equal to the marginal cost of production—the additional cost of producing one more unit of a

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<sup>90</sup> See KRUGMAN & WELLS, *supra* note 16, at 330–31; PINDYCK & RUBINFELD, *supra* note 12, at 8, 272.

<sup>91</sup> See KRUGMAN & WELLS, *supra* note 16, at 330; *see also* PINDYCK & RUBINFELD, *supra* note 12 at 272; *see also* STOFT, *supra* note 85, at 51–52.

<sup>92</sup> See STOFT, *supra* note 85, at 53.

<sup>93</sup> See *id.* at 51–53.

<sup>94</sup> See KRUGMAN & WELLS, *supra* note 16, at 332; *see also* PINDYCK & RUBINFELD, *supra* note 12, at 272–73; *see also* STOFT, *supra* note 85, at 53.

<sup>95</sup> See KRUGMAN & WELLS, *supra* note 16, at 332; *see also* PINDYCK & RUBINFELD, *supra* note 12, at 273.

<sup>96</sup> See KRUGMAN & WELLS, *supra* note 16, at 15.

<sup>97</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 272.

particular good or service.<sup>98</sup> The marginal cost takes into account the cost of inputs necessary for production, as well as the opportunity cost of capital, because sellers will consider both in their decisions.<sup>99</sup>

The marginal cost of production is especially important in economic decisionmaking. Certain decisions, such as how much to produce, are decisions made “at the margin.”<sup>100</sup> Producers decide at the margin how much to produce by comparing the costs and the benefits of doing a little bit more of an activity—known as the marginal cost and benefit.<sup>101</sup> At a perfectly competitive equilibrium, where demand equals supply, the marginal cost equals marginal benefit, and social welfare is maximized; producing any more or any less would reduce the net social welfare.<sup>102</sup> In the electricity context, if generating one more megawatt-hour of electricity benefits society more than it costs society, that additional generation increases social welfare.<sup>103</sup> Additional generation would continue to increase social welfare until the marginal benefit of one more megawatt-hour of electricity equals its marginal cost; at this point social welfare would be maximized.

In a perfectly competitive market, free entry and exit ensures that firms make what economists call “normal” economic profits in the long run.<sup>104</sup> Making normal economic profits means that a firm’s profit is zero after accounting for the opportunity cost of capital.<sup>105</sup> In other words, when a firm is making normal economic profits, incoming revenue is more than outgoing expenditures and there is a return on investment.<sup>106</sup> But this rate of return is just high enough to be considered worth investing in the firm, and no

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<sup>98</sup> See KRUGMAN & WELLS, *supra* note 16, at 231, 235–36; STOFT, *supra* note 85, at 57.

<sup>99</sup> See KRUGMAN & WELLS, *supra* note 16, at 230; PINDYCK & RUBINFELD, *supra* note 12, at 222, 283.

<sup>100</sup> See KRUGMAN & WELLS, *supra* note 16, at 8.

<sup>101</sup> See *id.*

<sup>102</sup> See *id.* at 106–113.

<sup>103</sup> See *id.* at 8, 235–36.

<sup>104</sup> See *id.* at 336; see also PINDYCK & RUBINFELD, *supra* note 12, at 294–96, 349.

<sup>105</sup> See KRUGMAN & WELLS, *supra* note 16, at 349; see also STOFT, *supra* note 85, at 58.

<sup>106</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 294, 296–97.

more.<sup>107</sup> If firms are making above normal profits, it would be economic for more firms to enter the market, pushing the market price—and hence profits—down.<sup>108</sup> If firms are making below normal profits, firms will exit the market, pushing the market price—and hence profits—up.<sup>109</sup> At the market equilibrium, all the firms that choose to stay in the market will be selling their goods at the marginal cost of production and will be making normal economic profits.

At this equilibrium, all consumers who value the good at or above this equilibrium price—marginal cost—and only those consumers, will buy the good.<sup>110</sup> In other words, the good is consumed by those who value it most.<sup>111</sup> Similarly, every seller that can produce the good at or below marginal cost, and only those sellers, will produce the good.<sup>112</sup> In this way, the good is produced by the cheapest suppliers.<sup>113</sup> Therefore, no mutually beneficial transactions are unexploited and the efficient amount of quantity is produced.<sup>114</sup> Essentially, the self-interest of individual actors ensures that an economy's resources are fully used and allocated according to their best use.

The price at this perfectly competitive equilibrium serves as a signal of the value of the good to society and works to drive efficient resource allocation.<sup>115</sup> In electricity markets, if such prices can be achieved, then both dispatch and investments would be economically efficient.<sup>116</sup> With the right price signals, wholesale markets will incentivize the entry of new generation when it is economical to do so, and the exit of existing generation when it is uneconomical. If FERC can ensure that the wholesale markets match the characteristics of perfectly competitive markets, then the wholesale rates and the resulting allocation of resources

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<sup>107</sup> See KRUGMAN & WELLS, *supra* note 16, at 340; see also PINDYCK & RUBINFELD, *supra* note 12, at 294, 296–97.

<sup>108</sup> See KRUGMAN & WELLS, *supra* note 16, at 346; see also PINDYCK & RUBINFELD, *supra* note 12, at 295; STOFT, *supra* note 85, at 53.

<sup>109</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 295.

<sup>110</sup> See KRUGMAN & WELLS, *supra* note 16, at 109.

<sup>111</sup> See STOFT, *supra* note 85, at 52–53.

<sup>112</sup> See KRUGMAN & WELLS, *supra* note 16, at 109.

<sup>113</sup> See STOFT, *supra* note 85, at 53.

<sup>114</sup> See KRUGMAN & WELLS, *supra* note 16, at 109; STOFT, *supra* note 85, at 53.

<sup>115</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 611.

<sup>116</sup> See STOFT, *supra* note 85, at 54.

would be economically efficient. FERC's actions over the past several decades show that it has indeed embraced these principles of perfectly competitive markets.

## II. FERC'S SHIFT TOWARD COMPETITIVE WHOLESALE MARKETS

During the majority of the twentieth century, electricity markets were composed of vertically integrated firms that formed natural monopolies; thus, market-based principles were not directly applicable.<sup>117</sup> But over the last few decades, FERC has begun to harness these principles to promote competitive markets. This Part will provide an overview of this shift.

### A. *Natural Monopolies and the Cost-of-Service Model*

Until recently, vertically integrated utilities owned all levels of generation, transmission, and distribution in order to provide electricity to consumers. Under that model, electricity was considered a natural monopoly, characterized by high fixed costs and, hence, falling average costs with increasing output.<sup>118</sup> In those circumstances, it is generally more efficient to have one firm serve the entire market.<sup>119</sup> But if that monopolist is left to its own devices, it has an incentive to restrict the amount it produces and charge higher prices to consumers, preventing some mutually beneficial transactions from happening and creating a welfare loss.<sup>120</sup> Therefore, regulation is necessary to ensure that welfare is maximized.<sup>121</sup> Typically, regulators determine a price that allows the natural monopolist to recover costs and a "fair" rate of return, without exploiting consumers.<sup>122</sup> In other words, regulation is meant to guarantee the natural monopolist receive normal economic profits, and nothing more.

Before the 1990s, due to the vertically integrated nature of the electricity market, FERC relied on this natural monopoly framework to regulate the market. Rates were judged just and reasonable if they allowed utilities to recover costs as well as "a

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117 See, e.g., *Fed. Power Comm'n v. Texaco Inc.*, 417 U.S. 380, 397 (1974).

118 See KRUGMAN & WELLS, *supra* note 16, at 359.

119 See PINDYCK & RUBINFELD, *supra* note 12, at 372.

120 See KRUGMAN & WELLS, *supra* note 16, at 366–372.

121 See *id.* at 373–74.

122 See PINDYCK & RUBINFELD, *supra* note 12, at 372–73.

reasonable profit,” known as cost-based rates.<sup>123</sup> Indeed, in the context of the monopoly forces at play in the market then, relying on market-based rates would have been unjust and unreasonable.<sup>124</sup>

### B. *Competition and FERC’s Responses*

But over the past several decades, smaller utilities have begun to compete with bigger utilities and transmission has become more economical, leading to jockeying for power—and the possibility for real competition.<sup>125</sup> Increased competition was partly driven by the 1970s oil crisis.<sup>126</sup> Congress responded to the crisis by enacting the Public Utility Regulatory Policy Act (PURPA) to encourage firms to build new generation sources.<sup>127</sup> At the same time, states began to deregulate their energy markets, allowing “load serving entities” (utilities that serve customers)<sup>128</sup> to purchase electricity at wholesale from generators and use that electricity to serve their customers.<sup>129</sup> As competition seeped into the electricity markets,

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<sup>123</sup> See *ISO New England, Inc. & New England Power Pool Participants Comm. v. New England Power Generators Ass’n*, 135 FERC ¶ 61,029, ¶ 253 (2011); see also *Fed. Power Comm’n v. Hope Nat. Gas Co.*, 320 U.S. 591, 603 (1944) (“The rate-making process under the Act, i.e., the fixing of ‘just and reasonable’ rates, involves a balancing of the investor and the consumer interests.”). For an economic critique of the cost-of-service framework, see Harvey Averbach & Leland L. Johnson, *Behavior of the Firm Under Regulatory Constraint*, 52 AM. ECON. REV. 1052, 1052–69 (1962).

<sup>124</sup> See *Fed. Power Comm’n v. Texaco Inc.*, 417 U.S. 380, 397 (1974). This case involves the Natural Gas Act (NGA), but it is relevant to interpretations of the FPA because of the similar language in the two statutes. See *Maine v. Fed. Energy Regulatory Comm’n*, 854 F.3d 9, 20 (D.C. Cir. 2017) (explaining that “judicial interpretations of the FPA and the NGA may be followed interchangeably”).

<sup>125</sup> See Bateman & Tripp, *supra* note 36, at 289.

<sup>126</sup> JUSTIN GUNDLACH & ROMANY WEBB, COLUMBIA LAW SCH. SABIN CTR. FOR CLIMATE CHANGE LAW, CARBON PRICING IN NEW YORK: ISO MARKETS 6 (2017), <https://ssrn.com/abstract=2876895>.

<sup>127</sup> See Hammond & Spence, *supra* note 85, at 151; see also GUNDLACH & WEBB, *supra* note 126, at 6.

<sup>128</sup> “Load serving entities” are utilities that have an obligation under federal, state or local law or under contract to provide electricity to end users. See 16 U.S.C. § 824q(a)(2)–(3) (2012).

<sup>129</sup> See *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1292 (2016); see also *Grid Reliability & Resilience Pricing*, 162 FERC ¶ 61,012, ¶ 8 (2018) (“[S]tarting in the 1990s, a number of states restructured their retail electricity markets to allow for more competition in the generation sector, which further contributed to development of bulk power markets and increased reliance on independent regional bodies for operation of the grid.”); Regional Transmission

FERC responded by embracing markets as a useful tool for ensuring just and reasonable rates.

### 1. *Embracing Markets*

As competition increased, FERC began allowing firms to use market-based rates to set wholesale prices. In 1989, FERC issued an order allowing a “power marketer,” Citizens Power & Light Corp., to engage in market-based wholesale transactions.<sup>130</sup> Power marketers buy electricity services from utilities and resell them on the wholesale market; they do not own any transmission or generation facilities.<sup>131</sup> While taking steps to ensure that Citizens Power could not exert market power,<sup>132</sup> FERC found that allowing the marketer to use flexible prices to make those deals would provide several benefits, including allowing Citizens Power to adapt quickly to new market conditions.<sup>133</sup> FERC also found that pricing flexibility would help align prices with “market conditions of scarcity or abundance.”<sup>134</sup> Following the *Citizens Power* decision, FERC approved hundreds of petitions to use market-based rates on similar grounds.<sup>135</sup>

Since that time, FERC has regularly upheld the virtues of competition as a way to ensure just and reasonable rates.<sup>136</sup> Growing competition meant that market rates rather than cost-of-service rates could be used to achieve a socially optimal result. By moving to market-based prices, rather than administratively-determined prices, FERC was able to encourage a system that would better reflect changing conditions, “thereby providing market participants with an efficient price signal.”<sup>137</sup> As FERC

Organizations, 65 Fed. Reg. 810, 813–14 (2000) (to be codified at 18 C.F.R. pt. 35) (describing state efforts to enhance competition).

<sup>130</sup> See *Citizens Power & Light Corp.*, 48 FERC ¶ 61,210 (1989).

<sup>131</sup> See *id.* at 61,776.

<sup>132</sup> See *infra* Part II.B.3.a.

<sup>133</sup> See *Citizens Power & Light Corp.*, 48 FERC ¶ 61,210, 61,777 (1989).

<sup>134</sup> *Id.*

<sup>135</sup> See, e.g., *Heartland Energy Servs., Inc.*, 68 FERC ¶ 61,223 (1994); *Regional Transmission Organizations*, 65 Fed. Reg. 810, 813 (Dec. 20, 1999) (to be codified at 18 C.F.R. pt. 35) (explaining in 2000 that FERC had “granted market-based rate authority to more than 800 entities”).

<sup>136</sup> See, e.g., *ISO New England, Inc. & New England Power Pool Participants Comm. New England Power Generators Ass’n*, 135 FERC ¶ 61,029, ¶ 254 (2011).

<sup>137</sup> See, e.g., *Frequency Regulation Compensation in the Organized Wholesale Power Markets*, 137 FERC ¶ 61,064, ¶ 128 (2011) (explaining that

explained recently, this support for competitive markets is “grounded in the substantial and well-documented economic benefits that these markets provide to consumers.”<sup>138</sup> Competition reduces consumers’ bills and also provides additional savings “by removing congestion bottlenecks.”<sup>139</sup> In addition, if the price signals in competitive markets are accurate, they could be relied on to encourage efficient allocation of resources, adjust supply, promote expansion, and help determine where new generators should be located.<sup>140</sup>

This change in regulatory paradigm from cost-of-service to market competition is grounded in the fundamental principle of economic theory that perfectly competitive markets are efficient. As explained above, economic theory shows that if FERC can ensure that wholesale markets imitate the basic characteristics of perfectly competitive markets, then the realized market prices also imitate perfectly competitive market prices and are efficient.<sup>141</sup> For that reason, FERC has used competition to achieve its “just and reasonable” mandate.<sup>142</sup> Indeed, FERC has explained that its “vision” now is to “ensure the delivery of dependable, affordable energy through reliance on sustained competitive markets.”<sup>143</sup>

FERC’s shift away from the cost-of-service model to the competition model has been affirmed by the U.S. Court of Appeals for the D.C. Circuit. As the court held, when true competition exists, FERC can rely on “market-based prices in lieu of cost-of-

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the market-based system had several benefits, including the fact that it would “encourage market participants to accurately bid their cost to provide the service” and that “better reflect current system conditions and need for frequency regulation”).

<sup>138</sup> Grid Reliability & Resilience Pricing, 162 FERC ¶ 61,012, ¶ 11 (2018).

<sup>139</sup> *Id.*

<sup>140</sup> See Order Directing Submission of Information with Respect to Internal Processes for Reporting Trading Data, 103 FERC ¶ 61,089, ¶ 11 (2003).

<sup>141</sup> See *supra* Part I.B.

<sup>142</sup> See, e.g., ISO New England, Inc. & New England Power Pool Participants Comm. New England Power Generators Ass’n, 135 FERC ¶ 61,029, ¶ 254 (2011).

<sup>143</sup> See Order Directing Submission of Information with Respect to Internal Processes for Reporting Trading Data, 103 FERC ¶ 61,089, ¶ 11 (2003); see also Regional Transmission Organizations, 65 Fed. Reg. 810, 811 (Dec. 20, 1999) (to be codified at 18 C.F.R. pt. 35) (“Competition in wholesale electricity markets is the best way to protect the public interest and ensure that electricity consumers pay the lowest price possible for reliable service.”).

service regulation to assure a ‘just and reasonable’ result.”<sup>144</sup> With truly competitive parties, the D.C. Circuit explained that it would be “rational to assume that the terms of their voluntary exchange are reasonable, and specifically to infer that price is close to marginal cost, such that the seller makes only a normal return on its investment,”<sup>145</sup> exactly in line with the principles of perfectly competitive markets.

## 2. *Enhancing and Encouraging Markets*

Besides embracing market-based rates, FERC has also taken steps to encourage markets. In 1996 and 2000, FERC issued two orders—Order 888 and Order 2000 respectively—which encouraged the creation of Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs), wholesale market operators that run wholesale electricity markets and are regulated as utilities.<sup>146</sup> In Order 888,<sup>147</sup> FERC encouraged transmission owners to form ISOs that would “operate the transmission system independently of, and foster competition for electricity generation among, wholesale market participants.”<sup>148</sup> FERC also provided guidelines for ISOs in order to promote financial independence from the utilities themselves and used pricing rules that fostered efficient generation, transmission, and demand.<sup>149</sup> In bringing transmission owners together, ISOs help facilitate transmission across regions, increasing opportunities for competition and promoting efficiency.<sup>150</sup>

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<sup>144</sup> *Elizabethtown Gas Co. v. Fed. Energy Regulatory Comm’n*, 10 F.3d 866, 870 (D.C. Cir. 1993).

<sup>145</sup> *Tejas Power Corp. v. Fed. Energy Regulatory Comm’n*, 908 F.2d 998, 1004 (D.C. Cir. 1990).

<sup>146</sup> See *Regional Transmission Organizations*, 65 Fed. Reg. at 810.

<sup>147</sup> See *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*, 61 Fed. Reg. 21,540, 21,595–96 (May 10, 1996) (to be codified at 18 C.F.R. pts. 35 and 385); see also *Open Access Same-Time Information System and Standards of Conduct*, 61 Fed. Reg. 21,737 (May 10, 1996) (to be codified at 18 C.F.R. pt. 37) (rule issued in tandem with Order 888 in order to facilitate information sharing).

<sup>148</sup> FED. ENERGY REGULATORY COMM’N, *ENERGY PRIMER: A HANDBOOK OF ENERGY MARKET BASICS* 40 (2015), <https://www.ferc.gov/market-oversight/guide/energy-primer.pdf> [hereinafter *ENERGY PRIMER*].

<sup>149</sup> See *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Utilities*, 61 Fed. Reg. 21,540 (Apr. 24, 1996) (to be codified at 18 C.F.R. pts. 35 and 385).

<sup>150</sup> See *Regional Transmission Organizations*, 65 Fed. Reg. at 814–15.

In Order 2000, FERC urged utilities to increase the use of the ISO framework and set up RTOs to manage the grid on behalf of utilities that own transmission lines.<sup>151</sup> RTOs help promote efficiency by harnessing market incentives and promoting “efficient plant operations.”<sup>152</sup> Those incentives also help encourage efficiency in the ways that plants operate by increasing the number of generators entering the market, resulting in more competition with existing generators.<sup>153</sup>

As a result of FERC’s orders, RTOs and ISOs now manage the majority of electricity sales between load-serving entities and generators in the United States and help ensure reliable transmission in many parts of the country.<sup>154</sup> ISOs and RTOs set market prices by running auctions for energy, capacity, and ancillary services.<sup>155</sup> Energy services allow load-serving entities to obtain energy from generators as needed.<sup>156</sup> Capacity services ensure that there is enough generation capacity to reliably meet peak demand.<sup>157</sup> Ancillary services, such as frequency regulation and operating reserves, are necessary to help balance the electric grid as the electricity demand must equal electricity supply at all times.<sup>158</sup> End users of electricity pay for all three of these services, based on the rates set through the ISO and RTO auctions. FERC ensures that the resulting rates are just and reasonable by reviewing the auction rules as submitted by the wholesale market operators under section 205.<sup>159</sup>

The use of competitive market systems, such as auctions, helps ISOs and RTOs ensure reliability, balance supply and demand, provide competitive nondiscriminatory markets, and plan

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<sup>151</sup> See *N.J. Bd. of Pub. Utils. v. Fed. Energy Regulatory Comm’n*, 744 F.3d 74, 82 (3d Cir. 2014).

<sup>152</sup> *Regional Transmission Organizations*, 65 Fed. Reg. at 829.

<sup>153</sup> See *id.*

<sup>154</sup> See *id.*; ENERGY PRIMER, *supra* note 148, at 40 (explaining that “two-thirds of the nation’s electricity load is served in RTO regions”). There is very little substantive difference between RTOs and ISOs. Both are “voluntary associations of the owners of transmission lines.” *N. J. Bd. of Pub. Utils*, 744 F.3d at 82.

<sup>155</sup> See ENERGY PRIMER, *supra* note 148, at 59; see also *Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty.*, 554 U.S. 527, 537 (2008).

<sup>156</sup> See ENERGY PRIMER, *supra* note 148, at 59–61.

<sup>157</sup> See *id.* at 61.

<sup>158</sup> See *id.* at 36, 55, 74, 79–80.

<sup>159</sup> See *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1294 (2016).

for transmission needs.<sup>160</sup> Simplified for purposes of explanation, in the auctions, market operators ask generators for their bids to sell in the market, order these bids from lowest to highest, and start dispatching generators to meet the demand at a given time, taking into account any capacity limitations of the grid.<sup>161</sup> The bid of the last generator that is needed to meet the demand—in other words, the market clearing price—is then paid to all generators that are cleared.<sup>162</sup>

Because every resource that clears the auction receives the same market clearing price, and only those resources that clear the auction receive any payment, generators have an incentive to bid the lowest price they are willing to accept for producing one more unit—the marginal cost of production.<sup>163</sup> If generators bid higher than their marginal cost of production, they risk not being dispatched. Alternatively, if generators bid lower than their marginal cost of production, they risk losing money.<sup>164</sup> This inherent incentive means that only those generators that can produce and deliver electricity below the market clearing price—the marginal cost—are dispatched, and thus the auction minimizes the cost of serving all the customers while allocating economic resources only to the cheapest generators.

Although wholesale markets are administrative constructs, their design is intended to mimic perfectly competitive markets.<sup>165</sup> The auctions and other rules in energy markets are designed specifically to ensure that the market clearing price reflects the marginal cost of producing and delivering that last unit of electricity at a particular time and location, and to ensure that only those generators that can produce and deliver electricity at or

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<sup>160</sup> See ENERGY PRIMER, *supra* note 148, at 58.

<sup>161</sup> See Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 763 (2016).

<sup>162</sup> See *id.*

<sup>163</sup> See *supra* Part I.B.

<sup>164</sup> See, e.g., Frequency Regulation Compensation in the Organized Wholesale Power Markets, 137 FERC ¶ 61,064, ¶ 128 (Oct. 20, 2011) (explaining that the auction system encourages “market participants to accurately bid their cost to provide the service” because a generator “that chooses to increase its offer price could find itself in a position of not being dispatched and, therefore, losing potential revenues”).

<sup>165</sup> See *supra* Part I.B.

below that price are dispatched.<sup>166</sup> In other words, the outcome of the market design will approximate the outcome of a perfectly competitive market. As FERC has explained, the auction “sends critical information to market participants, improves transparency, and generally results in more efficient outcomes in RTO/ISO energy markets.”<sup>167</sup>

Further, energy and capacity markets, where they exist, are intended to give efficient price signals for economically efficient entry and exit, which ensures that generators are making normal economic profits in the long run.<sup>168</sup> If generators are making above-normal economic profits, new generators will enter. If generators are making below-normal profits, some will retire. Consequently, self-interested actions of generators ensure that “an economy’s resources are fully used and allocated according to their best use,” consistent with the outcome of perfectly competitive markets, as described in Part I.B, *supra*.

### 3. *Supervising Markets*

Markets rarely function as well as discussed above, though. Indeed, the much-idealized perfectly competitive markets rarely exist outside of academic textbooks. In many cases, there are market failures.<sup>169</sup> When these failures occur and markets are left to their own devices, price no longer reflects the social marginal cost.<sup>170</sup> In other words, market prices no longer signal the true social value of the goods; in those circumstances markets forces and individual actors’ self-interests cannot ensure the most efficient allocation of society’s resources—and regulation is necessary.<sup>171</sup>

Along with encouraging markets, FERC has long recognized such market failures and has intervened, as needed, “to break down

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<sup>166</sup> See Offer Caps in Markets Operated by Regional Transmission Organizations and Independent System Operators, 157 FERC ¶ 61,115 (2016) (to be codified at 18 C.F.R. pt. 35).

<sup>167</sup> *Id.* ¶ 36.

<sup>168</sup> See *supra* Part II.B.2.

<sup>169</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 611–13 (explaining that competitive markets will achieve an efficient allocation of resources).

<sup>170</sup> See *id.*

<sup>171</sup> See *California ex rel. Lockyer v. Fed. Energy Regulatory Comm’n*, 383 F.3d 1006, 1014 (9th Cir. 2004) (explaining that a market-based tariff is lawful as long as it is combined with enforceable reporting that enables FERC to determine “whether market forces were truly determining the price”).

regulatory and economic barriers that hinder a free market in wholesale electricity”<sup>172</sup> and to ensure competition.<sup>173</sup> Only with market failures under control can FERC rely on the “invisible hand of the market” to set “rates that are just and reasonable.”<sup>174</sup>

Competitive markets generally fail for four different reasons: (1) market power, (2) asymmetric information, (3) public goods, and (4) externalities.<sup>175</sup> Each of these market failures distorts the market price, moving it away from the social marginal cost and making a regulatory intervention necessary to restore efficiency. The manner in which FERC intervenes to correct any of these depends on the type of failure. This Part explains these four categories of market failures and shows that FERC has intervened to correct all of the standard market failures. In this way, it demonstrates how FERC’s use of efficiency to achieve just and reasonable rates and prevent undue discrimination has set a precedent the Agency could rely on to use its broad powers under sections 205 and 206 of the FPA to correct the CO<sub>2</sub> emission market failure.

#### a. *Market Power*

FERC’s efforts to prevent market power provide a commanding example of how it has addressed market failures in pursuit of just and reasonable rates. Market power is the ability of a consumer or a producer to affect the market price.<sup>176</sup> Market

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<sup>172</sup> Fed. Energy Regulatory Comm’n v. Elec. Power Supply Ass’n, 136 S. Ct. 760, 768 (2016) (quoting Morgan Stanley Capital Grp. v. Pub. Util. Dist. No. 1 of Snohomish Cty., 554 U.S. 527, 536 (2008)); see, e.g., Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, 61 Fed. Reg. 21,540, 21,541 (May 10, 1996) (to be codified at 18 C.F.R. pts. 35 and 385) (breaking down the monopoly power of transmission line owners).

<sup>173</sup> See Grid Reliability & Resilience Pricing, 162 FERC 61,012, ¶ 9 (2018).

<sup>174</sup> Mont. Consumer Counsel v. Fed. Energy Regulatory Comm’n, 659 F.3d 910, 916 (9th Cir. 2011) (“Where sellers do not have market power or the ability to manipulate the market (alone or in conjunction with others), it is not unreasonable for FERC to presume that rates will be just and reasonable.”); see also Michael A. Rosenhouse, Annotation, *Construction and Application of Mobile-Sierra Doctrine*, 62 A.L.R. Fed. 2d 427 (discussing the “presumption that a rate set in a freely negotiated contract passes the statutory ‘just and reasonable’ test”).

<sup>175</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 612–13.

<sup>176</sup> See KRUGMAN & WELLS, *supra* note 16, at 358; see also Citizens Power & Light Corp., 48 FERC ¶ 61,210, 61,777 (1989) (“Market power for a seller

power usually arises when there is a limited number of buyers or sellers. A firm without any other sellers to compete with can charge a price higher than the marginal cost without worrying about losing market share to competitors.<sup>177</sup> But when the market price deviates from the competitive level, some mutually beneficial transactions do not take place. In those circumstances, the social welfare is lower than what it could be and the market outcome is not economically efficient.

There are two types of market power: horizontal and vertical.<sup>178</sup> Horizontal market power occurs when a buyer (or seller) has a significant share of a market and therefore can affect the market price.<sup>179</sup> If a generator has a large enough market share, it can increase the market price for electricity by withholding generation capacity. Vertical market power occurs when a seller is involved in two or more activities, one of which is a necessary input for another, and can use its dominance in that first market to its advantage in the second market.<sup>180</sup> A transmission owner that also owns a generation firm can hamper the competitiveness of other generators by charging them high rates to use the lines, and hence improve the profits of its own generation firm.

In an effort to ensure just and reasonable rates, FERC has addressed both horizontal and vertical market power. For example, as FERC moved towards market-based rates and allowed sellers to “enter into freely negotiated contracts with purchasers,”<sup>181</sup> it required sellers to demonstrate that they lack both horizontal and vertical market power, thus ensuring that consumers have “genuine alternatives to buying the seller’s product.”<sup>182</sup> In other words, FERC demanded proof of a competitive market, with accurate price signals. According to FERC, a seller can show that it lacks market power if it can satisfy three conditions.<sup>183</sup> First, the seller

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exists when the seller can significantly influence price in the market by withholding service and excluding competitors for a significant period of time.”).

<sup>177</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 349–50.

<sup>178</sup> See U.S. DEP’T OF ENERGY, HORIZONTAL MARKET POWER IN RESTRUCTURED ELECTRICITY MARKETS at v, [http://www.energymarketers.com/Documents/DOE\\_Horizontal\\_MP-0308.pdf](http://www.energymarketers.com/Documents/DOE_Horizontal_MP-0308.pdf) (last visited Sept. 13, 2018).

<sup>179</sup> See *id.*

<sup>180</sup> See *id.*

<sup>181</sup> Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty., 554 U.S. 527, 537 (2008).

<sup>182</sup> Louisville Gas & Elec. Co., 62 FERC ¶ 61,016, 61,144 (1993).

<sup>183</sup> See *id.* at ¶¶ 61,143–44.

must show that it is not a dominant firm in the relevant market.<sup>184</sup> Second, the seller must show that it does not own or control “transmission facilities through which the buyer could reach alternative sellers,” or if it does own such facilities, it must show that it “has adequately mitigated its ability to block the buyer from reaching other sellers.”<sup>185</sup> Third, the seller must show that it cannot control entry and exit of other firms into or out of the market.<sup>186</sup>

The first condition, lack of dominance, is related to horizontal market power. FERC addressed this in its rule adopting market-based rates. In the market-based rates rule, FERC instituted a 20 percent market share threshold as well as a screening tool that allows it to check for market power.<sup>187</sup> If a seller has a greater than 20 percent share of the market, it is likely to have an ability to affect the market price and therefore cannot be considered a price-taking firm, as is needed for perfect competition.<sup>188</sup>

The second and third conditions, related to entry and exit, require sellers to show that they lack vertical market power. Energy markets, by their nature, are especially susceptible to vertical market power. As FERC has recognized, the most likely way for a generator to exert market power is owning the transmission lines.<sup>189</sup> Without access to those transmission lines, other generators cannot otherwise sell electricity and compete in the market. Alternatively, if a firm controls the locations where new generation might be built,<sup>190</sup> that firm can make it harder for competitors to enter. Market power allows a firm to erect these barriers to entry.

Over the years, FERC has consistently used these two conditions to check for, and mitigate, vertical market power. For

<sup>184</sup> *See id.*

<sup>185</sup> *Id.*

<sup>186</sup> *See id.*

<sup>187</sup> *See* Market-Based Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Public Utilities, 119 FERC ¶ 61,295, ¶ 13 (2007).

<sup>188</sup> *See supra* Part I.B (describing the principle of price-taking firms). Similarly, FERC uses the screening tool to evaluate the potential of a seller to exercise market power at peak demand times. *See* Market-Based Rates, 119 FERC ¶ 61,295, ¶ 77 (2007).

<sup>189</sup> *See* Citizens Power & Light Corp., 48 FERC ¶ 61,210, 61,777(1989).

<sup>190</sup> *See* Louisville Gas & Elec. Co., 62 FERC ¶ 61,016, 61,147 (“An important consideration in evaluating market power is ease of entry. Ease of entry can erode a firm’s market power over time as new entrants compete away monopoly rents. Economic theory generally holds that market power is difficult to sustain over the long-run unless entry barriers exist.”).

example, in 1989, when FERC analyzed whether Citizens Power should be permitted to use flexible market-based rates to sell energy on the wholesale market, FERC looked at Citizens Power's ability to exert market power.<sup>191</sup> In granting Citizens Power permission, FERC found that the firm lacked market power, because it did not own transmission facilities and was not affiliated with any owner of transmission facilities.<sup>192</sup> FERC also attached conditions to the use of market-based rates, requiring Citizens Power to notify FERC if those circumstances changed and to make informational filings describing "its purchase and sale contracts for generation and transmission" so that FERC could monitor whether the company was acquiring the ability to exercise vertical market power.<sup>193</sup> With those conditions, FERC found that the flexible market-based rates Citizens Power proposed were permissible under the FPA.<sup>194</sup>

Five years later, FERC addressed a similar but broader request from Heartland Energy Services, Inc. to use market-based rates.<sup>195</sup> Heartland was an electric power marketing company, which bought and sold electricity.<sup>196</sup> The difference with Heartland was that, unlike Citizens Power, Heartland was affiliated with an electric utility that controlled generation and transmission.<sup>197</sup> FERC nonetheless allowed Heartland to use market-based rates as long as its affiliate allowed competitors to access its transmission services.<sup>198</sup>

Following those orders, in the 1990s, FERC took a broader approach to correcting for vertical market power. In 1996, FERC issued Order 888, under its section 206 authority, which directs transmission owners to allow competitors to access their transmission lines and directs transmission providers to offer service to all customers equally.<sup>199</sup> The rule was designed to

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<sup>191</sup> See *Citizens Power & Light Corp.*, 48 FERC ¶ 61,210, 61,777 (1989).

<sup>192</sup> See *id.*

<sup>193</sup> See *id.* at 61,778.

<sup>194</sup> See *id.* at 61,779.

<sup>195</sup> See *Heartland Energy Servs., Inc.*, 68 FERC ¶ 61,223, 62,052 (1994).

<sup>196</sup> See *id.* at 62,052.

<sup>197</sup> See *id.* at 62,060.

<sup>198</sup> See *id.* at 62,064.

<sup>199</sup> Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, 61 Fed. Reg. 21,540, 21,560 (May 10, 1996).

remove barriers to competition and improve efficiency in the electricity market.<sup>200</sup>

In 1999, following Order 888, FERC found that utilities were still discriminating and began a new rulemaking to address that discrimination.<sup>201</sup> A year later, FERC issued Order 2000—invoking both its authority to prevent undue discrimination and to ensure just and reasonable rates<sup>202</sup>—which encouraged transmission providers to establish RTOs.<sup>203</sup> This step allowed FERC to “pry open” the market and reduce inefficiencies caused by too many different utilities operating different parts of the grid separately.<sup>204</sup> Order 2000 also reaffirmed the requirement that utilities seeking to use market-based rates need to demonstrate that market power had been mitigated and that no other barriers to entry exist.<sup>205</sup>

FERC’s actions to address market power have not been limited to sellers. FERC has also addressed buyer-side market power, known as monopsony.<sup>206</sup> Owners of generation capacity sometimes also buy capacity. If a seller buys enough to outweigh the capacity it owns, in other words, if the seller is a “net buyer”, that seller may have incentives to try to depress market clearing prices below competitive levels.<sup>207</sup> As a net buyer, a seller can depress market prices by offering its own capacity for sale below the cost of providing it.

To address buyer-side market power concerns raised by this situation, FERC approved use of PJM’s “Minimum Offer Price Rule.”<sup>208</sup> The Minimum Offer Price Rule “mitigates” the effect of buyer-side market power by requiring any net buyers to submit a higher bid when those sellers would otherwise be able to suppress

<sup>200</sup> *See id.* at 21,541.

<sup>201</sup> *See* Regional Transmission Organizations, 64 Fed. Reg. 31,390, 31,391 (proposed May 13, 1999).

<sup>202</sup> *See* Regional Transmission Organizations, 65 Fed. Reg. 810, 840 (Dec. 20, 1999) (to be codified at 18 C.F.R. pt. 35).

<sup>203</sup> *See* Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty., 554 U.S. 527, 536 (2008) (citing Regional Transmission Organizations, 65 Fed. Reg. at 840).

<sup>204</sup> *See id.*

<sup>205</sup> *See* Regional Transmission Organizations, 65 Fed. Reg. at 840.

<sup>206</sup> *See, e.g.,* PJM Interconnection, L.L.C., 117 FERC ¶ 61,331 (2006).

<sup>207</sup> *See id.* ¶ 103.

<sup>208</sup> *Id.* ¶ 104.

market prices.<sup>209</sup> For example, when PJM first designed its Minimum Offer Price Rule, an offer would be mitigated if the offer price was (1) sizable enough to depress capacity market clearing prices by more than 20 or 30 percent (depending on resource) or by more than \$25/MWh, and (2) was offered by an entity that purchased more capacity than it sold.<sup>210</sup> FERC found that the Minimum Offer Price Rule was a reasonable way of making sure that net buyers were not able to exercise “monopsony power by seeking to lower prices through self-supply.”<sup>211</sup> Courts have held that FERC generally has the authority to approve Minimum Offer Price Rules.<sup>212</sup>

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<sup>209</sup> See *NextEra Energy Res., LLC v. Fed. Energy Regulatory Comm’n*, 898 F.3d 14, 18 (D.C. Cir. 2018); *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331, ¶ 103 (2006) (“Subject to certain exemptions, if the supply offer of a net buyer falls below certain specified levels, and if its net purchases exceed certain specified levels, and if it does not convince the PJM Market Monitor that the offer is cost-justified, the Market Monitor may establish an alternative higher bid. The alternative bid would equal 90 percent of the Market Monitor’s estimate of the bidder’s Net Asset Class Cost of New Entry (or, if this cost is not available, 80 percent of the Net Cost of New Entry for the Reference Resource).”).

<sup>210</sup> See *N.J. Bd. of Pub. Utils. v. Fed. Energy Regulatory Comm’n* 744 F.3d 74, 85 (3d Cir. 2014) (describing PJM’s rule); PJM, PJM MANUAL 18: PJM CAPACITY MARKET 37 (2018), <http://www.pjm.com/-/media/documents/manuals/m18.ashx>; PJM, PJM OPEN ACCESS TRANSMISSION TARIFF 2912 (2010), <https://www.pjm.com/directory/merged-tariffs/oatt.pdf>; see also *NextEra Energy Res., LLC v. Fed. Energy Regulatory Comm’n*, 898 F.3d 14, 18 (D.C. Cir. 2018) (describing rule in ISO New England).

<sup>211</sup> *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331, ¶ 104 (2006). Since its inception, PJM has revised the design and the aim of the Minimum Offer Price Rule significantly and now uses the rule to “mitigate” state public policies. The use of the rule for that purpose is economically inefficient. See SYLWIA BIALEK & BURCIN UNEL, INST. FOR POLICY INTEGRITY, CAPACITY MARKETS AND EXTERNALITIES: AVOIDING UNNECESSARY AND PROBLEMATIC REFORMS I (2018), <http://policyintegrity.org/publications/detail/capacity-markets-and-externalities>.

<sup>212</sup> See *New England Power Generators Ass’n v. Fed. Energy Regulatory Comm’n*, 757 F.3d 283, 286–87 (D.C. Cir. 2014) (finding that FERC has authority to approve an ISO’s rule subjecting a new generator to the Minimum Offer Price Rule in order to mitigate the new generators’ ability to depress prices). Though the Minimum Offer Price Rule began as a reasonable effort to combat “true attempts to exercise buyer-side market power,” recently, it has “morph[ed]” into “an examination of whether states have provided support or a subsidy to a resource that is selling into the capacity market.” *ISO New England Inc.*, 158 FERC ¶ 61,138, 61,892 (2017) (Bay, C., concurring). Under that theory, new renewable resources that had received state subsidies should be mitigated because those resources may be able to submit below-cost bids into the capacity auction and artificially suppress capacity prices. See, e.g., Request for Rehearing of Nextera Energy Resources LLC, the PSEG Companies and the

b. *Asymmetric Information*

FERC has also addressed asymmetric information to ensure efficient electricity markets. Asymmetric information occurs in situations where one or more market participants have information not available to other participants, which they can exploit to their benefit.<sup>213</sup> Asymmetric information can lead to market failure in several ways, including through “adverse selection” and “moral hazard.”

Adverse selection arises when there is hidden information. If buyers do not have sufficient information about the true quality of a good, too many low-quality products and too few high-quality products could be sold in the market.<sup>214</sup> For example, when generators are paid the same amount regardless of their actual performance, cheaper and less reliable generators will likely be selected more often than more expensive yet reliable ones.

Moral hazard arises when the actions of one party cannot be perfectly observed and others bear the costs of that party’s lack of care or effort.<sup>215</sup> For example, when generators can recover all their costs through regulated rates, they may be tempted to take riskier positions than are wise and shift the risks of their actions to ratepayers. As a result, the trades that take place may not be mutually beneficial and some mutually beneficial trades may be missed. Hence, when there is asymmetric information, the market outcome is inefficient.

Information asymmetry between regulators and the regulated entity creates perverse incentives for the latter. When a regulated entity’s profits depend on its private information, such as its costs, it may have an incentive to manipulate or misstate that information, at the expense of customers. Sometimes it is not possible for either the regulator or the regulated entity to have perfect information to combat that manipulation. For example,

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NRG Companies, ISO New England Inc. and New England Power Pool Participants Committee at 23 (2016) (FERC No. ER14-1639-004). This use of the Minimum Offer Price Rule is problematic because it puts FERC “in constant tension with the states.” *See* ISO New England Inc., 158 FERC ¶ 61,138, 61,893 (Bay, C., concurring).

<sup>213</sup> *See* KRUGMAN & WELLS, *supra* note 16, at 559–60. Economists have varying names for this market failure, including “private information,” *id.*, and “asymmetric information,” PINDYCK & RUBINFELD, *supra* note 12, at 617.

<sup>214</sup> *See* PINDYCK & RUBINFELD, *supra* note 12, at 617–20.

<sup>215</sup> *See id.* at 628; KRUGMAN & WELLS, *supra* note 16, at 562.

because of unexpected price spikes in natural gas markets, the realized costs of a resource might be different than its ex-ante cost expectation and hence its bid into the wholesale markets might be significantly different than the realized cost of generation.

FERC has addressed many cases of asymmetric information under its authority to ensure just and reasonable rates. In a case involving the Idaho Power Company, FERC explained that allowing the firm to recover costs without any checks could remove incentives to contain costs.<sup>216</sup> To address this issue, a FERC administrative law judge ordered the company to submit a section 205 filing for any rate increase that exceeded a specified level and indicated that the company had the burden of showing that the resulting rate was just and reasonable.<sup>217</sup>

FERC has also addressed problems related to adverse selection and moral hazard in capacity markets. The market operator that runs wholesale markets in New England (ISO-NE) had a rule that allowed “available” resources to receive payments from the capacity markets.<sup>218</sup> The problem was that under ISO-NE’s rules, there were several exemptions allowing resources that were not actually available to be deemed as such and collect payments.<sup>219</sup> This feature failed to encourage performance and rewarded “less reliable resources over more reliable resources,” because generators that failed to improve services could still offer lower bids and receive payments.<sup>220</sup> These perverse incentives led to shortages and a sharp increase in unplanned outages.<sup>221</sup> FERC thus determined that ISO-NE should clearly link capacity payments with real-time performance and reward generators that were actually able to perform during shortages.<sup>222</sup>

In another context, FERC approved a hard cap for energy market offers to address the fact that utilities might have imperfect information about the short-run marginal costs of different

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<sup>216</sup> See Idaho Power Co., 120 FERC ¶ 63,014, ¶¶ 252–53 (2007).

<sup>217</sup> See *id.* ¶ 254.

<sup>218</sup> ISO New England Inc. & New England Power Pool, 147 FERC ¶ 61,172, ¶ 29 (2014).

<sup>219</sup> See *id.*

<sup>220</sup> See *id.* ¶ 26.

<sup>221</sup> See *id.*

<sup>222</sup> See *id.* ¶ 36.

resources when verifying incremental energy offers above \$1,000/MWh.<sup>223</sup>

The Enron scandal also provides an example of this market failure. In the period between 1997 and 2003, Enron failed to disclose to FERC many affiliate relationships, which had allowed it “to control assets and obtain sensitive commercial information.”<sup>224</sup> As a result of keeping that information hidden, Enron was able to engage in multiple schemes to manipulate the market “by sending false price signals to other market participants and making the market at particular points appear more liquid” than it really was.<sup>225</sup> In response, FERC invoked its authority under sections 205 and 206 “to protect electricity customers from unjust and unreasonable rates” and revoked Enron’s market-based rate authority.<sup>226</sup> FERC also ordered Enron to disgorge \$1.6 billion in “unjust profits” obtained through the schemes.<sup>227</sup>

FERC has recognized information problems in the natural gas context as well. For example, in gas pipeline sales, parties may be more willing to engage in speculative financing when they can shift the risks of that financing to ratepayers. In response, FERC recognizes only the “net book value” of the pipelines—the original purchase price “less its accumulated depreciation, depletion and amortization”<sup>228</sup>—rather than the price that parties negotiate for the facility on the open market.<sup>229</sup> Recognizing only the “net book value” helps minimize any risk that the firm would engage in “speculative financing and debt leveraging.”<sup>230</sup> As FERC explained, allowing the risks of speculative financing to be placed on ratepayers creates a moral hazard that can threaten the future of the firm “if and when” an “overleveraged ‘bubble’ bursts.”<sup>231</sup> Through this rule, FERC ensures that shareholders that are in a position to decide whether to bear the risk actually bear it.<sup>232</sup>

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<sup>223</sup> See Offer Caps, 157 FERC ¶ 61,115, ¶ 53 (2016) (to be codified at 18 C.F.R. pt. 35).

<sup>224</sup> Enron Power Mktg., Inc., 119 FERC ¶ 63,013, ¶ 28 (2007).

<sup>225</sup> Enron Power Mktg., Inc. & Enron Energy Servs., Inc., 103 FERC ¶ 61,343, ¶ 68 (2003).

<sup>226</sup> *Id.* ¶ 2.

<sup>227</sup> Enron Power Mktg., Inc., 126 FERC ¶ 61,230, ¶ 3 (2009).

<sup>228</sup> Mo. Interstate Gas, LLC, 137 FERC ¶ 63,014, ¶ 99 (2011).

<sup>229</sup> *See id.*

<sup>230</sup> *Id.* ¶ 103.

<sup>231</sup> *Id.*

<sup>232</sup> *See id.*

As a final example of FERC efforts to address information asymmetry, in 2003, FERC concluded that natural gas price indices based on information voluntarily reported by natural gas traders were inaccurate because the reports had been false.<sup>233</sup> And because many distribution companies or consumers who bought directly from the traders relied on the price indices, the manipulation of information helped raise the prices consumers and resellers paid to “extraordinary levels.”<sup>234</sup> To help correct this problem, FERC issued a Code of Conduct to amend all blanket certificates to prohibit sellers “from engaging in actions without a legitimate business purpose that manipulate or attempt to manipulate market conditions.”<sup>235</sup>

c. *Public Goods*

Public goods are another important market failure that FERC has addressed. Public goods are special types of goods that have two characteristics. First, they are “non-excludable,” because the supplier cannot prevent people who have not paid for the goods from consuming them.<sup>236</sup> Second, public goods are “non-rival in consumption,” because more than one person can consume the same unit of good at the same time.<sup>237</sup> When consumers can benefit without paying, public goods create a free rider problem.<sup>238</sup> And with free riders, suppliers are unlikely to invest in providing that good. As a result, without intervention, the market is unable to provide the socially efficient level of a public good.<sup>239</sup>

Grid reliability is a typical example of a public good.<sup>240</sup> When the grid is reliable, all users benefit from that reliability, even if they did not pay for the improvements. Thus, without regulation, it

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<sup>233</sup> See *Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1597 (2015).

<sup>234</sup> *Id.* at 1598 (internal quotation marks omitted).

<sup>235</sup> Amendments to Blanket Sales Certificates, 68 Fed. Reg. 66,324, 66,324 (Nov. 17, 2003) (to be codified at 18 C.F.R. pt. 284).

<sup>236</sup> See KRUGMAN & WELLS, *supra* note 16, at 461.

<sup>237</sup> See *id.*

<sup>238</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 678–79.

<sup>239</sup> See *id.*; see also Rossi, *supra* note 35, at 291 (explaining that “competitive interstate energy markets have failed to price important public goods”).

<sup>240</sup> See FENG ZHAO, ET. AL., ISO NEW ENGLAND, PRESENTATION AT FERC CONFERENCE: DEMAND CURVES IN FORWARD CAPACITY MARKET (FCM) 6 (June 27–29, 2016), [https://www.ferc.gov/CalendarFiles/20160804133957-3%20-%20DemandCurvesFCM\\_FengZhao.pdf](https://www.ferc.gov/CalendarFiles/20160804133957-3%20-%20DemandCurvesFCM_FengZhao.pdf) (explaining that “reliability is treated as a public good”).

is unlikely that suppliers would provide the good at socially efficient levels. FERC has long taken steps to address grid reliability. For example, it has directed wholesale market operators to plan and direct “expansions and upgrades” of the grid and to finance those activities through a fee added to “the price of wholesale electricity transmitted on the grid.”<sup>241</sup> Those fees must be just and reasonable and “at least roughly proportionate to the anticipated benefits to a utility of being able to use the grid.”<sup>242</sup>

In exercising its authority over this area, FERC found that it was just and reasonable to spread the costs of upgrades that were “designed to preserve the grid’s reliability,” explaining that those benefits are felt throughout the entire system.<sup>243</sup> Similarly, in an effort to expand transmission, FERC authorized credits to generators for “short-circuit and stability network upgrades,” on the ground that those upgrades would help expand the transmission system and “benefit all users.”<sup>244</sup> In another example, FERC allowed Western Massachusetts Electric Co. to roll the cost of grid upgrades into its transmission rates after showing that the upgrades performed “a system-wide function” and provided “benefits to all customers on the grid.”<sup>245</sup>

More recently, FERC’s authority to correct market failures related to public goods came up in the context of an intense debate over the Department of Energy’s plan to compensate certain plants

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<sup>241</sup> *Ill. Commerce Comm’n v. Fed. Energy Regulatory Comm’n*, 721 F.3d 764, 770 (7th Cir. 2013) (citing 18 C.F.R. §§ 35.34(k)(1), (7)).

<sup>242</sup> *Id.*

<sup>243</sup> *Entergy Servs., Inc. v. Fed. Energy Regulatory Comm’n*, 319 F.3d 536, 543–45 (D.C. Cir. 2003) (internal quotation marks and alteration omitted).

<sup>244</sup> *Id.* at 542; *see also Ill. Commerce Comm’n*, 721 F.3d at 774 (upholding FERC’s decision to distribute the cost of adding new wind power to the grid equally because those new resources would benefit the “entire regional grid by reducing the likelihood of brownouts or outages, which could occur anywhere on it”); *Ill. Commerce Comm’n v. Fed. Energy Regulatory Comm’n*, 756 F.3d 556, 558 (7th Cir. 2014) (noting the possibility that western utilities might “benefit from the new high-voltage transmission lines in PJM’s eastern region, and to the extent they do they can be required to contribute to the cost of building the new lines,” and remanding for more empirical analysis); *Midwest Indep. Transmission Sys. Operator, Inc.*, 133 FERC ¶ 61,221, 62,098 (2010) (determining that the benefits from new lines would be spread uniformly across utilities).

<sup>245</sup> *W. Mass. Elec. Co. v. Fed. Energy Regulatory Comm’n*, 165 F.3d 922, 927 (D.C. Cir. 1999).

for their ability to maintain a ninety-day supply of fuel on site.<sup>246</sup> According to the Department of Energy, maintaining onsite fuel was crucial to grid “resiliency,” and plants that could provide this service were receiving inadequate compensation.<sup>247</sup>

While the question of whether FERC had an adequate record to support such payments was very controversial, there was no dispute over FERC’s theoretical ability to remedy a market failure by pricing resilience. Ultimately, FERC terminated the proceeding, holding that neither the proposed rule nor the record demonstrated that existing rates were unjust and unreasonable, or that the remedy the Department of Energy proposed was just and reasonable.<sup>248</sup> FERC then directed ISOs and RTOs to submit comments addressing whether their markets provide enough resilience, how resilience is addressed in existing market-based mechanisms, and how, if at all, these market-based mechanisms should be modified to “better address resilience.”<sup>249</sup> But despite vigorous debate over whether the evidence supported the need for the proposed rule, those submissions generally recognized FERC’s theoretical authority to address resilience.<sup>250</sup>

d. *Externalities*

FERC has also addressed externalities (at least in part). An externality is the unaccounted-for cost or benefit imposed on third

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<sup>246</sup> See Grid Resiliency Pricing Rule, 82 Fed. Reg. 46,940, 46,945 (proposed Oct. 10, 2017) (to be codified at 18 C.F.R. pt. 35).

<sup>247</sup> *Id.* at 46,942 (“There is a growing recognition that organized markets do not necessarily pay generators for all the attributes that they provide to the grid, including resiliency. Because wholesale pricing in those markets does not adequately consider or accurately value those benefits, fuel-secure generation resources are often not compensated for those benefits.”).

<sup>248</sup> See Grid Reliability & Resilience Pricing, 162 FERC ¶ 61,012, ¶ 14 (2018).

<sup>249</sup> *Id.* ¶ 27.

<sup>250</sup> See, e.g., Amanda Durish Cook et al., *RTO Resilience Filings Seek Time, More Gas Coordination*, RTO INSIDER (March 11, 2018) (summarizing comments), <https://www.rtoinsider.com/ferc-iso-ne-resilience-gas-electric-coordination-88190>; Comments of the Electric Power Supply Ass’n at 6, Docket No. AD18-7-000 (May 9, 2018), [https://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20180509-5131](https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20180509-5131) (“FERC has the responsibility and authority to ensure that effective competition will achieve a secure, reliable, and resilient ‘all of the above’ electricity system.”); see generally BURCIN UNEL & AVI ZEVI, INST. FOR POLICY INTEGRITY, TOWARD RESILIENCE, DEFINING, MEASURING, AND MONETIZING RESILIENCE IN THE ELECTRICITY SYSTEM (Aug. 1, 2018), <https://policyintegrity.org/publications/detail/toward-resilience>.

parties by a market transaction not borne by the parties engaged in the transaction.<sup>251</sup> A negative externality, such as CO<sub>2</sub> emissions by fossil fuel-fired plants, imposes climate damages on society at large.<sup>252</sup> A positive externality, such as reducing the likelihood of others being infected when vaccinated, creates benefits enjoyed by the whole society.<sup>253</sup> Because these costs or benefits are not incurred directly by the parties making market decisions, the resulting price of the good does not reflect the true social value of the good. That leads to a market outcome that is socially inefficient.<sup>254</sup>

When externalities are present, they must be fully “internalized” to reach economic efficiency.<sup>255</sup> Internalizing the externality means that the parties of the deal bear those costs and benefits.<sup>256</sup> The prices in this case “must reflect all the (marginal) costs of production and consumption—not only those borne directly by the transacting parties but also those that may be foisted on outsiders.”<sup>257</sup> Once the costs are internalized and prices reflect them, parties will enter into a different, welfare-maximizing transaction. To ensure that parties internalize an externality, a regulator can impose a tax in the amount of the external damage (when the externality is negative) or a subsidy in the amount of the external benefit (when the externality is positive).<sup>258</sup>

FERC has addressed externalities, just as it has the other three market failures discussed, in an effort to promote economic efficiency. For example, network congestion is an important externality that affects the justness and the reasonableness of wholesale rates.<sup>259</sup> When a limited capacity resource such as a transmission network is used, increased demand by one customer at times when the transmission network is close to its capacity

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<sup>251</sup> See KRUGMAN & WELLS, *supra* note 16, at 437.

<sup>252</sup> See *id.*

<sup>253</sup> See *id.*

<sup>254</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 315–16, 645.

<sup>255</sup> See KRUGMAN & WELLS, *supra* note 16, at 438.

<sup>256</sup> See ALFRED E. KAHN, *THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS* 69 (1988).

<sup>257</sup> *Id.*

<sup>258</sup> See KRUGMAN & WELLS, *supra* note 16, at 442–44, 450. In the context of CO<sub>2</sub> emissions, this principle would prescribe an economy-wide carbon tax on all polluters.

<sup>259</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 139; see also KRUGMAN & WELLS, *supra* note 16, at 437 (describing traffic congestion as an externality).

limit might mean that another customer cannot be served. If these customers do not pay for the congestion costs that their increased demand creates, then the amount of electricity they demand may be higher than the socially efficient level, leading to a higher-than-socially-efficient level of congestion. On the other hand, if market prices during high-demand times were to increase to reflect the fact that the network is congested, then these customers may face price signals that better reflect the societal cost of their incremental demand and likely reduce their demand, as some customers may reach the point where the cost is no longer worth the benefit. In other words, internalizing the negative externality related to network congestion leads to a more efficient level of generation.

Market operators have developed Locational Marginal Prices (LMPs) to address this externality and ensure that energy prices reflect the true cost of delivering electricity to a particular location, including the opportunity costs related to the physical limits of the transmission system and the cost of generating electricity.<sup>260</sup> The LMP approach allows the market to take into account “the opportunity costs of using congested transmission paths.”<sup>261</sup> LMPs reflect the cost of generating enough electricity to serve the demand at a particular time and location.<sup>262</sup> As the demand at a particular location increases, the network that transmits energy to that location becomes increasingly congested, and it may not be possible to transmit electricity from the least-cost generator to serve the demand at that location.<sup>263</sup> At such times, the LMPs increase to reflect the constraints of the transmission system (in addition to the changes in price due to increased costs of generating electricity).<sup>264</sup>

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<sup>260</sup> See Pa.-N.J.-Md. Interconnection Atl. City Elec. Co., 81 FERC ¶ 61,257, 62,253-56 (1997) (approving PJM’s locational marginal pricing model); Sacramento Mun. Util. Dist. v. Fed. Energy Regulatory Comm’n, 616 F.3d 520, 524–26 (D.C. Cir. 2010) (discussing the history of California’s implementation of locational marginal pricing).

<sup>261</sup> Pa.-N.J.-Md. Interconnection Atl. City Elec. Co., 81 FERC ¶ 61,257, 62,253-56 (1997).

<sup>262</sup> See ENERGY PRIMER, *supra* note 148, at 60.

<sup>263</sup> See *id.*

<sup>264</sup> See, e.g., Eisen, *supra* note 30, at 1828 (explaining how “transmission planning [is] a ‘practice affecting rates’” and within FERC’s authority to regulate, because a system “with less transmission is more congested—and produces more expensive rates for delivered electricity”).

In this way, LMPs help “promote efficient use of the transmission grid, promote the use of the lowest-cost generation, provide for transparent price signals, and enable transmission grid operators to operate the grid more reliably.”<sup>265</sup> Courts have upheld FERC’s reliance on LMPs, as LMPs give “market participants incentives to avoid congestion-causing transactions” and are “more economically efficient,” allowing “scarce transmission capacity” to be “allocated to those who value it most instead of being physically rationed.”<sup>266</sup> As this discussion shows, using the LMP is an attempt to internalize the congestion cost. This example, combined with all the other examples of FERC addressing market failures described above, shows how FERC has invoked market efficiency in numerous ways over the years to address market failures as it works to comply with its statutory duty to ensure just and reasonable rates and prevent undue discrimination.

### III. AUTHORITY TO ADDRESS EXTERNALITIES RELATED TO CARBON DIOXIDE EMISSIONS

Given FERC’s long history of addressing market failures, the crucial question is whether it has authority to correct the externality that results from CO<sub>2</sub> emissions. It is well-settled that FERC may not act unless it has “authority delegated” to it by Congress.<sup>267</sup>

As explained in Part I, Congress tasked FERC with ensuring just and reasonable rates as well as correcting undue discrimination. FERC’s authority in this area extends to regulating any rules or practices that “directly affect the wholesale rate.”<sup>268</sup> Part II demonstrated how FERC has fully embraced the principles of economic efficiency in its efforts to ensure just and reasonable rates. This Part explains how internalizing the external cost of CO<sub>2</sub> emissions would help correct a market failure and prevent undue

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<sup>265</sup> Cal. Indep. Sys. Operator Corp., 116 FERC ¶ 61,274, 62,136 (2006).

<sup>266</sup> Wis. Pub. Power, Inc. v. Fed. Energy Regulatory Comm’n, 493 F.3d 239, 250–51 (D.C. Cir. 2007).

<sup>267</sup> See e.g., Clean Air Council v. Pruitt, 862 F.3d 1, 9 (D.C. Cir. 2017) (quotation marks omitted); accord Maine v. Fed. Energy Regulatory Comm’n, 854 F.3d 9, 24 (D.C. Cir. 2017) (“As a creature of statute, FERC has only those powers endowed upon it by statute.” (internal quotation marks omitted)); Cal. Indep. Sys. Operator Corp., 372 F.3d at 398 (internal quotation marks omitted).

<sup>268</sup> Fed. Energy Regulatory Comm’n v. Elec. Power Supply Ass’n, 136 S. Ct. 760, 774 (2016) (internal quotation marks omitted).

discrimination. Seen from an economic perspective, FERC should have the authority to address issues that directly affect the efficiency of rates and services, which includes addressing the direct impact the external cost of CO<sub>2</sub> emissions has on rates.<sup>269</sup>

Externalities, if not internalized, create a discrepancy between the market price and the socially efficient price (the social marginal cost). When generators emit CO<sub>2</sub> and cause damages to society, they do not incur any (or incur minimal) additional cost themselves, and they will thus make bids and generation decisions based on their lower private costs. When this happens, the resulting market price will only reflect the private costs to generators and not the external cost of CO<sub>2</sub> emissions. As a result, the market price will be lower than the social marginal cost of producing electricity.<sup>270</sup>

As explained above, production decisions are made using a marginal analysis, where producers compare marginal costs to the price they receive for each megawatt-hour—the marginal benefit.<sup>271</sup> Therefore, when there are external costs, the generation mix will be decided based on this (low) market price, and fossil fuel-fired generators will be paid to generate electricity that is costlier to society than the market price. In other words, from society's perspective, electricity will not be generated by the lowest-cost suppliers, which will lead to a higher than socially desirable level of electricity generation (and, hence, pollution) from fossil fuel-fired generators.<sup>272</sup> Further, because the average private cost of production is less than the average social cost, some

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<sup>269</sup> See Todd S. Aagaard, *Energy-Environment Policy Alignments*, 90 WASH. L. REV. 1517, 1533 (2015) (“A rational regulatory approach . . . would pursue an efficient market that would be both competitive and would internalize externalities.”); Eisen, *supra* note 30, at 1783 (FERC’s jurisdiction extends to the terms and conditions of the operation of wholesale markets that affect the markets directly and significantly); *Miss. Indus. v. Fed. Energy Regulatory Comm’n*, 808 F.2d 1525, 1553 (D.C. Cir. 1987), *vacated in part on other grounds*, 822 F.2d 1103 (D.C. Cir. 1987) (upholding FERC’s jurisdiction over capacity that directly affects costs and thus rates); *Municipalities of Groton v. Fed. Energy Regulatory Comm’n*, 587 F.2d 1296, 1296 (D.C. Cir. 1978); *Cal. Indep. Sys. Operator Corp.*, 119 FERC ¶ 61,076, ¶¶ 540–56 (2007) (finding that maintaining adequate resources falls within Commission jurisdiction because it has a direct and significant effect on wholesale rates and services); *ISO New England, Inc.*, 119 FERC ¶ 61,161, ¶¶ 18–30 (2007) (same).

<sup>270</sup> See *supra*, Part I.B.

<sup>271</sup> See *id.*

<sup>272</sup> See, e.g., Simeonov, *supra* note 25 at 334.

firms remain in the market even though it would be more socially efficient for them to exit.<sup>273</sup>

Because of the external cost, the bids of certain higher-emitting resources are lower than they would be in a socially efficient market. Therefore, not imposing a carbon price distorts the value of emitting resources relative to non-emitting resources. Failing to recognize the external cost of CO<sub>2</sub> emissions thus poses an undue disadvantage to generation sources that do not entail a similarly high external cost, because those resources are not compensated correctly.<sup>274</sup>

Solving these problems through a carbon price would change the market price to reflect the true social cost of generating electricity.<sup>275</sup> In that way, a carbon price would align markets so that they accurately take this externality into account and appropriately remove an unreasonable barrier to development of generation that is less socially costly. As a result, outcomes would be more economically efficient “with the markets themselves determining the appropriate mix of resources.”<sup>276</sup> As FERC explained in the context of demand response programs, which reduce demand for electricity at certain peak times: “while the level of compensation provided to each resource affects its willingness and ability to participate in the energy market,” ultimately the markets would determine the mix of generation needed to serve demand.<sup>277</sup>

Traditionally, FERC has pursued rates that match “as closely as practicable, the costs to serve each class or individual customer”<sup>278</sup> and used market efficiency to achieve that result.<sup>279</sup>

<sup>273</sup> See PINDYCK & RUBINFELD, *supra* note 12, at 648.

<sup>274</sup> See, e.g., Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. 16,658, 16,664 (2011) (to be codified at 18 C.F.R. pt. 35) (describing concerns that fossil-fuel priced generation is mispriced).

<sup>275</sup> See Catherine M.H. Keske et al., *Total Cost Electricity Pricing: A Market Solution for Increasingly Rigorous Environmental Standards*, 25 *ELECTRICITY J.* 7 (2012) (describing Colorado’s experience with one type of “adder” program); see also Bateman & Tripp, *supra* note 36, at 329 (describing an approach that would internalize the cost of carbon in the wholesale markets).

<sup>276</sup> Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. at 16,668, n.59.

<sup>277</sup> *Id.*

<sup>278</sup> See, e.g., Elec. Consumers Res. Council v. Fed. Energy Regulatory Comm’n, 747 F.2d 1511, 1514 (D.C. Cir. 1984) (internal quotation marks omitted).

But without correcting the CO<sub>2</sub> externality market failure, which imposes a significant external cost on society, purchasers of electricity cannot “fully realize costs associated with the production and consumption of electric power.”<sup>280</sup> Ignoring the externality ignores the need to take into account the true cost of serving customers.<sup>281</sup> Markets fail to achieve efficiency in the presence of externalities, just as they do when there is market power, asymmetric information, or public goods.<sup>282</sup> And any effort to achieve just and reasonable rates through market efficiency is incomplete unless it accounts for all the direct social costs of generation.

Because the CO<sub>2</sub> externality is directly related to the social marginal cost of electricity generation, and thus to the efficient wholesale rate, the argument that FERC does not have jurisdiction to address CO<sub>2</sub> emissions because they are an environmental issue<sup>283</sup> misses the mark. As the Court’s decision in *FERC v. Electric Power Supply Ass’n (EPSA)* makes clear, whether the decision has environmental consequences is not the guiding

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<sup>279</sup> See Fed. Energy Regulatory Comm’n v. Elec. Power Supply Ass’n, 136 S. Ct. 760, 779 (2016) (explaining that FERC’s “mission” is to “improve the competitiveness, efficiency, and reliability of the wholesale market”).

<sup>280</sup> Simeonov, *supra* note 25, at 334.

<sup>281</sup> See *id.* (“[I]t is inconsistent for a regulatory agency claiming to achieve ‘just and reasonable’ rates to ignore the costs of such pollution effects on the environment and human health.”); Jeremy Knee, *Rational Electricity Regulation: Environmental Impacts and the “Public Interest,”* 113 W. VA. L. REV. 739, 766 (2011) (“[I]t is virtually impossible to minimize total costs if a substantial portion of costs are left out of the calculation.”); see also Rossi, *supra* note 35, at 6 (“[M]arket prices in energy often fail to reflect actual value.”); ALISON CASSADY ET AL., CTR. FOR AM. PROGRESS, BUILDING A 21ST CENTURY ECONOMY: THE CASE FOR PROGRESSIVE CARBON TAX 1 (Dec. 2016), <https://cdn.americanprogress.org/content/uploads/2016/12/15130607/CarbonTax-report.pdf> (“Climate change is a classic market failure.”); Weissman & Webb, *supra* note 37, at 3 (“Due to the presence of these externalities, market-based electricity rates are arguably not just and reasonable”).

<sup>282</sup> See KRUGMAN & WELLS, *supra* note 16, at 437; see also Weissman & Webb, *supra* note 37, at 6 (“The existence of environmental externalities represents another kind of market failure to which FERC could also respond by adjusting the bid price.”).

<sup>283</sup> See, e.g., Moot, *supra* note 38, at 348 (arguing that any action by FERC to put a price on CO<sub>2</sub> emissions would “constitute a jurisdictional bridge too far”); GUNDLACH & WEBB, *supra* note 126, at 2 (“Many view climate change as an environmental externality whose attendant costs lay beyond the scope of what ought to inform FERC’s assessment of wholesale rates’ justness and reasonableness.”). *But see* Bateman & Tripp, *supra* note 36, at 279 (arguing that FERC has authority to “consider environmental factors in its rate regulation”).

principle when examining if FERC has authority.<sup>284</sup> After all, the *EPSA* case approved demand response programs, which might also have an environmental benefit by decreasing the need for emission-intensive generators.<sup>285</sup> But rather than focusing on the environmental aspect, the court focused on the ability of demand response to improve reliability and bring down the marginal cost.<sup>286</sup> The principle that should guide FERC's decision to regulate is whether FERC is regulating a practice "that directly affect[s] the wholesale rate" and not whether the decision has environmental implications.<sup>287</sup>

The cases that discuss the question of FERC's authority to consider environmental impacts help illustrate this distinction. In *PSI Energy, Inc.*, petitioners argued that there were "siting, health, safety, environmental [and] archaeological problems" associated with an interconnection agreement and that FERC should consider those issues before approving the agreement.<sup>288</sup> FERC rejected that argument explaining that it does not have "siting or certification authority with respect to transmission lines" and that health risks should be dealt with by the agencies that have jurisdiction over those issues.<sup>289</sup> Similarly, in *Crees*, plaintiffs argued that authorizing Hydro-Quebec "to sell power at market-based rates will lead to an increase in Hydro-Quebec's exports, which will in turn lead to the construction of new hydroelectric facilities, which 'will destroy fish and wildlife upon which Cree fishermen, trappers and hunters depend.'" <sup>290</sup> But the D.C. Circuit found that plaintiffs did not have standing, because FERC's ratemaking authority did not extend to such a long chain of environmental effects.<sup>291</sup>

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<sup>284</sup> See *Elec. Power Supply Ass'n*, 136 S. Ct. at 774 (explaining the "directly affect" test).

<sup>285</sup> See *id.* at 767; Aagaard, *supra* note 269, at 1557 (explaining that FERC found that demand response programs would have "possible environmental benefits") (citing FED. ENERGY REGULATORY COMM'N, ASSESSMENT OF DEMAND RESPONSE & ADVANCED METERING 5 (2008), <http://www.ferc.gov/legal/staff-reports/demand-response.pdf>).

<sup>286</sup> See *Elec. Power Supply Ass'n*, 136 S. Ct. at 774.

<sup>287</sup> See *id.*

<sup>288</sup> See *PSI Energy, Inc.*, 55 FERC ¶ 61,254, 61,811 (1991).

<sup>289</sup> See *id.*

<sup>290</sup> *Grand Council of the Crees v. Fed. Energy Regulatory Comm'n*, 198 F.3d 950, 952 (D.C. Cir. 2000); see also *Monongahela Power Co.*, 39 FERC ¶ 61,350, 62,096 (1987) ("Congress has not granted the Commission authority to reject rate filings on environmental grounds.").

<sup>291</sup> *Grand Council of the Crees*, 198 F.3d at 958.

Both *PSI Energy* and *Crees* involved the indirect environmental consequences of discrete actions that did not alter the social *marginal* cost of market-based actions. Therefore, those actions did not change the marginal decisions, such as when a generator should be dispatched in the auction, that directly affect market rates. Such indirect environmental consequences would be best examined through a cost-benefit analysis or National Environmental Policy Act (NEPA) analysis, not through rates. FERC has experience dealing with environmental consequences under NEPA. For example, in approving a natural gas pipeline project, FERC ordered the owner to minimize the adverse impact of the project on the surrounding community,<sup>292</sup> using an economic test to determine that the benefits outweighed any remaining “residual adverse effects.”<sup>293</sup> Analysis under NEPA is a sufficient tool for such indirect environmental considerations that do not affect the social marginal cost of market transactions.

In contrast to the indirect environmental issues at issue in *PSI Energy* and *Crees*, the market failure caused by CO<sub>2</sub> emissions is directly related to the market transaction. It is directly related to the efficient price that suppliers should receive for producing electricity and to the “costs actually caused by the customer who must pay them.”<sup>294</sup> And from an economic perspective, any effort to harness markets in order to ensure just and reasonable rates is incomplete without addressing this market failure.<sup>295</sup> Indeed, barring FERC from regulating those externalities perpetuates an inefficiency and “would subvert the FPA.”<sup>296</sup>

There are, of course, important limitations on FERC’s authority to price carbon in wholesale markets.<sup>297</sup> But the underlying principle—that the external cost of carbon pollution is a market failure like any other and that FERC should correct it in order to ensure efficient markets—should form the starting point

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<sup>292</sup> See *Columbia Gas Transmission, LLC*, 158 FERC ¶ 61,046, ¶¶ 23–24 (2017).

<sup>293</sup> *Id.* ¶ 24.

<sup>294</sup> *Ill. Commerce Comm’n v. Fed. Energy Regulatory Comm’n*, 576 F.3d 470, 476 (2009).

<sup>295</sup> See, e.g., Eisen, *supra* note 30, at 1788.

<sup>296</sup> *Fed. Energy Regulatory Comm’n v. Elec. Power Supply Ass’n*, 136 S. Ct. 760, 780 (2016).

<sup>297</sup> See *infra* Part IV.

of any effort to understand FERC's authority to address the external costs of carbon pollution.

#### IV. THE LIMITS ON FERC'S AUTHORITY TO ADDRESS EXTERNALITIES RELATED TO CARBON DIOXIDE EMISSIONS

FERC's authority to address CO<sub>2</sub> emissions is not without bounds, just as its authority to address any other market failure is not without bounds. States have longstanding authority over their generation mix and FERC can neither directly intrude on that authority<sup>298</sup> nor haphazardly impose or approve a carbon price without evidentiary support.<sup>299</sup> Furthermore, the eventual rate must be just and reasonable and not unduly discriminatory or preferential. Each of these issues is addressed in turn below.

##### *A. Areas of Traditional State Control*

The FPA grants FERC authority only over wholesale sales, "and thereby maintains a zone of exclusive state jurisdiction."<sup>300</sup> FERC's jurisdiction under the FPA is limited to facilities used for the transmission and wholesale sale of electric energy. Thus, FERC does "not have jurisdiction . . . over facilities used in local distribution."<sup>301</sup> Instead, states have "traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like;"<sup>302</sup> the

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<sup>298</sup> See *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983).

<sup>299</sup> See *S.C. Pub. Serv. Auth. v. Fed. Energy Regulatory Comm'n*, 762 F.3d 41, 54 (D.C. Cir. 2014) (quoting 16 U.S.C. § 824e(a)).

<sup>300</sup> *Elec. Power Supply Ass'n*, 136 S. Ct. at 767.

<sup>301</sup> 16 U.S.C. § 824(b)(1) (2012). Similarly, FERC's jurisdiction over electric reliability is limited to the "bulk-power system" which explicitly excludes "facilities used in the local distribution of electric energy." § 824o.

<sup>302</sup> *Pac. Gas & Elec. Co.*, 461 U.S. at 212; see also *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393, 417 (2d Cir. 2013) (traditional state authority includes the ability to "direct the planning and resource decisions of utilities"); *Conn. Dep't of Pub. Util. Control v. Fed. Energy Regulatory Comm'n*, 569 F.3d 477, 481 (D.C. Cir. 2009) (states have authority over existing generators); *S. Cal. Edison Co.*, 71 FERC ¶ 61,269, 62,076 (1995) (states can "diversify, their generation mix to meet environmental goals"); *In re S. Cal. Edison Co.*, 70 FERC ¶ 61,215, 61,676 (1995) (states may "favor particular generation technologies over others"); *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*, 61 Fed. Reg. 21,540, 21,626 (1996) (noting "state authority in such traditional areas as the authority over local service issues, including reliability of

FPA preserved that authority.<sup>303</sup> In fact, state regulation of utilities is one of the most important functions reserved to the states.<sup>304</sup> States may “order utilities to build renewable generators themselves, or . . . order utilities to purchase renewable generation.”<sup>305</sup> And FERC cannot supersede a state’s historic power over that area of traditional state concern, without a clear statement from Congress.<sup>306</sup>

As a result, any federal agency decision to either approve a carbon pricing plan submitted by an ISO/RTO or directly impose a carbon price would need to tread carefully so as not to intrude on an area of traditional state control. But when FERC is acting within its authority to regulate a practice directly affecting rates, its actions may very well indirectly affect state priorities. In the case of carbon pricing, if FERC acts within its authority to regulate wholesale rates and corrects a market failure that directly affects rates, the fact that a carbon price might affect state programs would not invalidate FERC’s action.<sup>307</sup> States would retain the authority to “develop whatever capacity resources they wish,”<sup>308</sup> and any incidental effect that those resources might have on wholesale markets is permissible under the FPA.<sup>309</sup> But it would remain within FERC’s authority to consider whether to adjust market rules in response, in order to ensure just and reasonable rates and prevent undue discrimination.<sup>310</sup>

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local service; administration of integrated resource planning and utility buy-side and demand-side decisions, including [demand-side management]; authority over utility generation and resource portfolios; and authority to impose non-bypassable distribution or retail stranded cost charges”).

<sup>303</sup> See generally 16 U.S.C. § 824(b).

<sup>304</sup> See *Allco Fin. Ltd. v. Klee*, 861 F.3d 82, 101 (2d Cir. 2017).

<sup>305</sup> *Id.*

<sup>306</sup> See e.g., *New York v. Fed. Energy Regulatory Comm’n*, 535 U.S. 1, 18 (2002); see also *Bond v. United States*, 134 S. Ct. 2077, 2089 (2014) (explaining that the Court avoids interpreting a statute so as to “dramatically intrude” on the State’s traditional criminal jurisdiction without a clear statement).

<sup>307</sup> See *Fed. Energy Regulatory Comm’n v. Elec. Power Supply Ass’n*, 136 S. Ct. 760, 776 (2016); see also Eisen, *supra* note 30, at 1839, 1844 (explaining that *Elec. Power Supply Ass’n*, 136 S. Ct. at 760, demonstrates that FERC can regulate reliability “even if that impacts the states”).

<sup>308</sup> *N. J. Bd. Of Pub. Utilities v. Fed. Energy Regulatory Comm’n*, 744 F.3d 74, 98 (3d Cir. 2014).

<sup>309</sup> See *Coalition for Competitive Elec., Dynergy Inc. v. Zibelman*, 906 F.3d 41, 57 (2d Cir. 2018).

<sup>310</sup> See *Elec. Power Supply Ass’n v. Star*, 904 F.3d 518, 524 (7th Cir. 2018) (explaining that the dual federal-state system allows states to set policies and

This thinking is analogous to EPA's actions in issuing the Clean Power Plan (CPP), an environmental regulation aimed at restricting CO<sub>2</sub> pollution from existing power plants.<sup>311</sup> The CPP, which is now being repealed,<sup>312</sup> imposed national guidelines restricting CO<sub>2</sub> emissions. Those guidelines may affect state decisions regarding their generation mix, just like a carbon price. But because EPA was acting within its statutory authority in issuing a pollution guideline, any impact on the states was permissible.<sup>313</sup> The fact that the FPA explicitly preserved state authority over retail rates<sup>314</sup> does not make it more difficult to overcome this hurdle in the context of a carbon price than it does for EPA acting under the Clean Air Act. Under either statute, states have traditional authority over their generation mix, and any effort to explicitly and directly interfere with that authority would require a clear statement from Congress. But if FERC were to set a carbon price in order to correct a market failure or approve a wholesale market operator's carbon pricing plan, that would be within FERC's statutory authority, and there would be a strong argument that it has not invaded a traditional area of state control.<sup>315</sup>

If FERC or an ISO/RTO were to incorporate a price for CO<sub>2</sub> emissions in the wholesale markets, states would likely seek to adjust to that wholesale carbon price in order to avoid double counting. For example, New York State has created a program to compensate nuclear generators for the value of zero-emission generation.<sup>316</sup> But as the state explained in creating the program, if NYISO, the state's wholesale market operator, "internalizes the value of the zero-emissions attributes in a manner that adequately

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FERC to determine what changes, if any, to make in response when regulating wholesale markets).

<sup>311</sup> See Carbon Pollution Emission Guidelines for Existing Stationary Sources, 80 Fed. Reg. 64,662, 64,666 (2015) (to be codified at 40 C.F.R. pt. 60).

<sup>312</sup> See Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 48,035, 48,037–38 (proposed Oct. 16, 2017).

<sup>313</sup> See Respondent EPA's Final Brief at 101–06, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 22, 2016), [https://www.edf.org/sites/default/files/content/epa\\_final.pdf](https://www.edf.org/sites/default/files/content/epa_final.pdf).

<sup>314</sup> See 16 U.S.C. § 824(b).

<sup>315</sup> *But see infra* Parts IV.B, C.

<sup>316</sup> See generally Order Adopting a Clean Energy Standard at 19, N.Y. PUB. SERV. COMM'N (Aug. 1, 2016), <http://on.ny.gov/2aKtpgA>.

replicates the economics of the program,” the state may discontinue the payments.<sup>317</sup>

There are three important limits on FERC’s authority to regulate states. First, if FERC sets a price on CO<sub>2</sub> emissions in order to directly undermine state programs that promote certain generation types—by, for instance, setting a price of carbon at a rate lower than the economically efficient level with the goal of replacing state renewable portfolio standards<sup>318</sup>—it could face significant challenges asserting that it has exceeded its authority.

Second, carbon pricing would not eliminate or “water down” any other non-carbon-related policies that states have.<sup>319</sup> State renewable portfolio standards have a number of goals in mind, including a diverse and reliable generation mix, price stability, economic benefits, improved local air quality, and reductions in CO<sub>2</sub> emissions.<sup>320</sup> Though states may decide that the carbon pricing scheme replicates some of their goals, a carbon pricing scheme should not replace or supplant states’ efforts to pursue other goals. As long as states do not attempt to directly supplant wholesale rates, states remain free to pursue policies that may affect rates.<sup>321</sup>

Third, a carbon price would not address other potential external costs of producing electricity, such as the costs imposed by other emissions such as sulfur dioxide, nitrous oxide, and other pollutants. Because any *carbon* pricing scheme could, by

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<sup>317</sup> *Id.* at 144.

<sup>318</sup> See *infra* Part IV.B (describing the evidentiary support that FERC would need when choosing the carbon price).

<sup>319</sup> See Welton, *supra* note 3, at 1074, 1115 (arguing that state preferences for particular types of clean energy, particular locations or scales, or broad-based inclusion or redistribution” could be watered down if decarbonization happens at the federal wholesale level).

<sup>320</sup> See BARRY G. RABE, RACE TO THE TOP: THE EXPANDING ROLE OF U.S. STATE RENEWABLE PORTFOLIO STANDARDS, PEW CTR. ON GLOB. CLIMATE CHANGE 6–8 (June 2006), <https://www.c2es.org/site/assets/uploads/2006/05/race-top-expanding-role-us-state-renewable-portfolio-standards.pdf>; see also *Allco Fin. Ltd. v. Klee*, 861 F.3d 82, 106 (2d Cir. 2017) (“Connecticut’s RPS program serves its legitimate interest in promoting increased production of renewable power generation in the region, thereby protecting its citizens’ health, safety, and reliable access to power.”).

<sup>321</sup> See *Coalition for Competitive Elec., Dynergy Inc. v. Zibelman*, 906 F.3d 41, 53–54 (2d Cir. 2018).

definition, only set a price for CO<sub>2</sub> emissions, states would be free to implement policies that set prices for other values.<sup>322</sup>

B. *FERC's Decisions Must Be Based on Substantial Evidence*

A second important consideration is the evidentiary support needed to implement any carbon charge. In order to require public utilities—including ISOs/RTOs—to implement tariff changes like this, FERC must justify its findings with a record supported by substantial evidence.<sup>323</sup> If FERC's judgment is not based on empirical evidence, it must be based, at least, on “reasonable economic propositions.”<sup>324</sup> That is, FERC must “specify the evidence on which it relied” and “explain how that evidence supports the conclusion it reached.”<sup>325</sup>

Under these principles, as FERC's authority is based on its role in promoting economic efficiency, its solutions to internalize this externality have to be grounded in economic theory. Prescriptions to internalize externalities are well-defined in economic theory. The best economic solution to internalizing an externality is to charge emitters a price based on the external cost emissions imposed on society. But FERC cannot impose just any price. A FERC-imposed carbon price has to be based on sound economic and scientific estimates of the external damages caused by CO<sub>2</sub> emissions.

Currently, the Interagency Working Group's Social Cost of Carbon represents the best estimate for the external damages of CO<sub>2</sub> emissions.<sup>326</sup> That estimate is based on the three most cited,

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<sup>322</sup> That said, if FERC or ISOs decided to internalize the external cost of other pollutants that result directly from electricity generation, the principles discussed in this Article would apply to that decision, too.

<sup>323</sup> See *S.C. Pub. Serv. Auth. v. Fed. Energy Regulatory Comm'n*, 762 F.3d 41, 65 (D.C. Cir. 2014).

<sup>324</sup> *Id.*

<sup>325</sup> *Id.* at 54.

<sup>326</sup> The National Academy of Sciences has recommended several improvements to the Interagency Working Group's methodology. See NAT'L ACAD. OF SCI., *VALUING CLIMATE DAMAGES: UPDATING ESTIMATION OF THE SOCIAL COST OF CARBON DIOXIDE 3* (2017), <https://www.nap.edu/read/24651/chapter/1>; NAT'L ACAD. OF SCI., *ASSESSMENT OF APPROACHES TO UPDATING THE SOCIAL COST OF CARBON: PHASE 1 REPORT ON A NEAR-TERM UPDATE 1* (2016), <https://www.nap.edu/read/21898/chapter/1>. In response to those recommendations, Resources for the Future and the Climate Impact Lab are working on the next update. See *RFF's Social Cost of Carbon Initiative*, RES. FOR THE FUTURE, <http://www.rff.org/research/collection/rffs-social-cost-carbon->

peer-reviewed models built to link external damages to each additional ton of CO<sub>2</sub> emissions.<sup>327</sup> To develop the estimate, the Interagency Working Group ran the three models using inputs and assumptions drawn from the peer-reviewed literature to reflect the latest and best scientific and economic data.<sup>328</sup> The estimate has been repeatedly endorsed by reviewers. In 2014, the U.S. Government Accountability Office reviewed the Interagency Working Group's methodology and concluded that it had followed a "consensus-based" approach, relied on peer-reviewed academic literature, disclosed relevant limitations, and adequately planned to incorporate new information through public comments and updated research.<sup>329</sup> In 2016, the U.S. Court of Appeals for the Seventh Circuit held that relying on the Interagency Working Group's estimate was reasonable.<sup>330</sup> And though the Trump Administration recently withdrew the Interagency Working Group's technical support documents,<sup>331</sup> experts continue to recommend that agencies rely on the Interagency Working Group's Social Cost of Carbon estimate as the best available estimate for the external cost of greenhouse gases.<sup>332</sup>

In fact, in many cases, agencies are still required to conduct cost-benefit analyses and calculate the monetary impact of greenhouse gas emissions.<sup>333</sup> And agencies have continued to use

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initiative (last visited Sept. 14, 2018); *Social Cost of Carbon*, CLIMATE IMPACT LAB, <http://www.climateprospectus.org/research-area/social-cost/> (last visited Sept. 14, 2018).

<sup>327</sup> The models are DICE (the Dynamic Integrated Model of Climate and the Economy), FUND (the Climate Framework for Uncertainty, Negotiation, and Distribution), and PAGE (Policy Analysis of the Greenhouse Effect).

<sup>328</sup> See TECHNICAL SUPPORT DOCUMENT, *supra* note 26.

<sup>329</sup> See GOV'T ACCOUNTABILITY OFFICE, REGULATORY IMPACT ANALYSIS: DEVELOPMENT OF SOCIAL COST OF CARBON ESTIMATES 12–19 (2014), <https://www.gao.gov/products/GAO-14-663>.

<sup>330</sup> See *Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 677–79 (7th Cir. 2016); see also Peter Howard & Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COLUM. J. ENVTL. L. 203 (2017) (describing the economic and policy justifications for using the Interagency Working Group's Social Cost of Carbon estimate).

<sup>331</sup> Exec. Order No. 13,783, 82 Fed. Reg. 16,093, 16,095–96 (Mar. 31, 2017).

<sup>332</sup> See Richard Revesz et al., *Best Cost Estimate of Greenhouse Gases*, 357 SCI. 655 (2017).

<sup>333</sup> For example, the U.S. Court of Appeals for the Ninth Circuit faulted the National Highway Traffic Safety Administration (NHTSA) for ignoring the costs of greenhouse gas emissions. See *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1192 (9th Cir. 2008). The court explained

the estimates from the Interagency Working Group's documents to calculate the damages associated with additional greenhouse gas emissions.<sup>334</sup> With that evidence, FERC or an ISO/RTO would be able to make the required showing that carbon pricing based on the Interagency Working Group's Social Cost of Carbon is supported by substantial evidence.

Conversely, if FERC does not adhere to sound economic principles it risks a court loss. For example, in *Tejas Power Corp. v. FERC*, the U.S. Court of Appeals for the D.C. Circuit overturned FERC's approval of a settlement because FERC assumed, without analysis, that the settlement would "inure to the benefit of consumers."<sup>335</sup> The court held that FERC did not justify an approval of the settlement, because it failed to show the market was so structured as to have "adequate incentives to keep costs down."<sup>336</sup> In other words, FERC failed to adequately address the market failures related to market power and asymmetric information.

FERC's recent decision on resilience is an additional illustration of a charge that did not have sufficient evidentiary support. In October 2017, the Department of Energy proposed a rule for final action by FERC, which would have compensated generators for "resiliency" if they kept ninety days of fuel on site.<sup>337</sup> But as FERC found, there was no evidence to support a finding that existing rates are unjust and unreasonable due to a

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that NHTSA's decision was arbitrary and capricious because, "while the record shows that there is a range of values, the value of carbon emissions reduction is certainly not zero." *Id.* at 1200; *see also* *Mont. Env'tl. Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1098–99 (D. Mont. 2017) (finding that it was arbitrary and capricious to quantify the benefits but not the greenhouse gas-costs of lease modifications); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014) (same).

<sup>334</sup> *See, e.g.*, U.S. DEP'T OF THE INTERIOR, BUREAU OF OCEAN ENERGY MGMT., DRAFT ENVIRONMENTAL IMPACT STATEMENT: LIBERTY DEVELOPMENT PROJECT 3-129, 4-246 (2017) (using the Social Cost of Carbon to assess the consequences of offshore oil and gas drilling), <https://cdxnodengn.epa.gov/cdx-enepa-II/public/action/eis/details?eisId=236901>; Energy Conservation Standards for Walk-In Cooler and Freezer Refrigeration Systems, 82 Fed. Reg. 31,808, 31,811, 31,853–58 (2017) (using the Social Cost of Carbon and Methane to assess an energy efficiency regulation).

<sup>335</sup> *Tejas Power Corp. v. Fed. Energy Reg. Comm'n*, 908 F.2d 998, 1003 (D.C. Cir. 1990).

<sup>336</sup> *Id.* at 1006.

<sup>337</sup> *See* Grid Resiliency Pricing Rule, 82 Fed. Reg. 46,940 (proposed Oct. 10, 2017) (to be codified at 18 C.F.R. pt. 35).

failure to compensate generators for grid resilience.<sup>338</sup> In imposing a carbon price, FERC would need to heed the principles laid out in these cases.

C. *Any Resulting Rates Must Be Just and Reasonable*

Another crucial limit is that, regardless of whether FERC is acting pursuant to sections 205 and 206, its actions must result in just and reasonable rates. Under section 205, when a utility or ISO/RTO submits a tariff for approval, FERC has authority to conduct “an inquiry into whether the rates proposed by a utility are reasonable.”<sup>339</sup> FERC does not have to conclude that current rates are unjust and unreasonable to approve a section 205 tariff filing,<sup>340</sup> but it must find that the proposed rates are just and reasonable.<sup>341</sup> And under section 206, after finding that current rates are unjust and unreasonable, FERC must “demonstrate through substantial evidence that the new rate is just, reasonable and not unduly discriminatory.”<sup>342</sup>

In conducting this analysis, FERC would need to look at factors such as whether the additional charge is reasonable and whether it properly balances customer and generator interests. Benefits of a wholesale price on carbon could include “harmonizing fragmented implementation” of renewable mandates and diversifying supply.<sup>343</sup> But there should be no room to dispute

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<sup>338</sup> See Grid Reliability & Resilience Pricing, 162 FERC ¶ 61,012, ¶ 15 (2018).

<sup>339</sup> *City of Bethany v. Fed. Energy Regulatory Comm’n*, 727 F.2d 1131, 1136 (1984); accord *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,237, ¶ 23 (2012).

<sup>340</sup> See *City of Winnfield v. Fed. Energy Regulatory Comm’n*, 744 F.2d 871, 875 (D.C. Cir. 1984).

<sup>341</sup> See *supra* Part I.A.

<sup>342</sup> *Ameren Servs. Co. v. Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,205, ¶ 32 (2007); see also *City of Bethany*, 727 F.2d at 1136; *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,237, ¶ 30 (2012).

<sup>343</sup> Peskoe, *supra* note 34, at 14; see also *ISO New England Inc.*, 158 FERC ¶ 61,138, ¶ 9 (2017) (finding that ISO-NE’s plan to exempt new renewable generators that had received states subsidies from the minimum offer price rule was reasonable because it ensured that customers would not have “to pay for capacity twice—first, for renewable resources via out-of-market” state-mandated payments and second for capacity on the capacity market even though no additional capacity was needed); *Bateman & Tripp*, *supra* note 36, at 313 (FERC could play a useful role in reducing inefficiencies in scattershot state-federal regulation of greenhouse gases).

that the FPA allows ISO/RTOs to include the feature in their proposals.

For example, under section 205, FERC has approved several proposals to consider the costs of compliance with state-level programs designed to promote renewable generation. FERC approved CAISO's decision to implement tariff changes that accommodated California's greenhouse gas cap-and-trade program.<sup>344</sup> CAISO's changes allowed generators to include the costs of complying with California's cap-and-trade program in their bids into the energy market.<sup>345</sup> FERC also approved ISO-NE's tariff changes, adopted to take into account generators' increased costs of complying with Regional Greenhouse Gas Initiative (RGGI), a multi-state CO<sub>2</sub> emissions cap-and-trade program. RGGI requires generators to purchase allowances for each ton of emitted CO<sub>2</sub>. In this way, RGGI "causes high-emitting generators to incur higher costs, which are then factored into their market offers" in the wholesale electricity market.<sup>346</sup> FERC approved the request of National Grid Generation (NGG) to include in its bid the cost of allowances it had to purchase to operate within a RGGI jurisdiction.<sup>347</sup> Similarly, in PJM, "[c]osts for environmental controls are part of bids for capacity resources in the PJM Capacity Market" and are "included in energy offers."<sup>348</sup>

When compliance costs are factored into a generator's bid in this way, the auction is able to take that cost of compliance into account: factoring it into bids shifts the supply curve up, increasing the ultimate price chosen in an auction. And for certain generators, including that cost in bids will put them out of the running, because their price will be too high. In this way, the auctions have begun to take the external costs of CO<sub>2</sub> emissions into account—to the extent that the compliance costs for these programs are related to those external costs.<sup>349</sup> And FERC has deemed the resulting

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<sup>344</sup> See CAL. CODE REGS. tit. 17, §§ 95810–11 (2014).

<sup>345</sup> See Cal. Indep. Sys. Operator Corp., 153 FERC 61,087, ¶ 57 (2015).

<sup>346</sup> ISO NEW ENGLAND, 2016 REGIONAL ELECTRICITY OUTLOOK 29 (2016), [https://www.iso-ne.com/static-assets/documents/2016/03/2016\\_reo.pdf](https://www.iso-ne.com/static-assets/documents/2016/03/2016_reo.pdf).

<sup>347</sup> See Nat'l Grid Generation, LLC, 143 FERC ¶ 61,163, ¶¶ 5, 12 (2013).

<sup>348</sup> MONITORING ANALYTICS, LLC, STATE OF THE MARKET REPORT FOR PJM 275, 278 (2016), [http://www.monitoringanalytics.com/reports/PJM\\_State\\_of\\_the\\_Market/2015/2015-som-pjm-volume2-sec8.pdf](http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2015/2015-som-pjm-volume2-sec8.pdf).

<sup>349</sup> Note that the compliance costs related to cap-and-trade programs such as RGGI are significantly lower than the Social Cost of Carbon, which is an

rates just and reasonable. As this Article has shown, fully internalizing the external cost of CO<sub>2</sub> emissions is a reasonable extension of these efforts to promote an efficient marketplace and would fall comfortably within FERC's authority over practices directly affecting rates.

#### CONCLUSION

FERC has long sought to regulate the market for energy by promoting efficiency. In pursuit of an efficient market, FERC has regulated market power, asymmetric information, public goods, and certain externalities. CO<sub>2</sub> emissions are just another externality. Unless the cost of the emissions is internalized by the generators that produce those emissions, the market outcomes will be inefficient and will not maximize social welfare. By failing to address this problem, FERC falls short of satisfying its mandate to ensure just and reasonable rates.

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estimate of the external damage values. For example, the RGGI auction price was \$4.02 in June 2018, only a small fraction of the full external damages calculated by the Social Cost of Carbon. *Compare* TECHNICAL SUPPORT DOCUMENT, *supra* note 26, at 16, *with* REGIONAL GREENHOUSE GAS INITIATIVE, ALLOWANCE PRICES AND VOLUMES, <https://www.rggi.org/auctions/auction-results/prices-volumes> (last visited Aug. 20, 2018).

2016

# FERC's Expansive Authority to Transform the Electric Grid

Joel B. Eisen

*University of Richmond*, [jeisen@richmond.edu](mailto:jeisen@richmond.edu)

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# FERC's Expansive Authority to Transform the Electric Grid

Joel B. Eisen\*

*Using an unprecedented historical analysis of over 100 years of law dating to the Progressive Era, this Article concludes that the Supreme Court's landmark decision in Federal Energy Regulatory Commission ("FERC") v. Electric Power Supply Association properly asserted that FERC has ample authority to pursue broad environmental and energy goals in transforming the electric grid. Building on the Court's finding that FERC may regulate "practices" that "directly affect" rates in wholesale electricity markets, the analysis develops a detailed standard that is consistent with interpretation of regulatory statutes in each of three distinct eras: the Progressive Era, the era of regulation of utilities under firm-specific tariffs, and the modern, market-based era. This Article also sets forth and discusses in depth four guiding principles that specify how FERC may use the "directly affecting" standard to take sweeping measures to inject new values in the wholesale electricity markets, such as accounting for environmental externalities. Analyzing FERC's initiatives to promote demand response (techniques for reducing electricity consumption, upheld in FERC v. EPSA) and a hypothetical carbon price imposed on bids in wholesale markets, the Article broadens our understanding of what FERC can regulate and what states can regulate, aiming to lessen ongoing jurisdictional tension and provide a means for addressing difficult cases involving preemption of state laws. The hope is*

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\* Copyright © 2016 Joel B. Eisen. Professor of Law, University of Richmond School of Law. The author thanks Emily Hammond, Dick Pierce, Jim Rossi, Joe Tomain, William Boyd, and the participants in conferences on electric utility regulation at Northwestern University Law School and the University of Texas, FPA workshops in Washington, D.C., and participants in the PUC Clean Energy Collaborative workshop in Washington, D.C. and a Richmond Law faculty workshop who commented on earlier drafts. The author also thanks Andy Flavin, Mercer May, and Ryan Suit for outstanding research assistance, and Joel Bernstein of Somos, Inc. for insights about the telecommunications industry.

*that additional clarity about jurisdictional boundaries will allow for more valuable innovation and experimentation in refashioning the electric grid.*

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#### INTRODUCTION

Some want the Federal Energy Regulatory Commission (“FERC”) to act boldly in transforming the electric grid.<sup>1</sup> Others believe it has overreached its authority when it has acted to promote reduced electricity consumption, stimulate innovation, and address climate change.<sup>2</sup> This conflict came to a head in *FERC v. Electric Power Supply Association* (“*FERC v. EPSA*”),<sup>3</sup> involving FERC’s Order 745.<sup>4</sup>

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<sup>1</sup> See, e.g., William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614, 1666-74 (2014); Joel B. Eisen, *An Open Access Distribution Tariff: Removing Barriers to Innovation on the Smart Grid*, 61 UCLA L. REV. 1712 (2014) [hereinafter *An Open Access Distribution Tariff*] (arguing for FERC to promulgate an “open access distribution tariff” to promote grid innovation); Steven Weissman & Romany Webb, *Addressing Climate Change Without Legislation, Volume 2: FERC: How the Federal Energy Regulatory Commission Can Use Its Existing Legal Authority to Reduce Greenhouse Gas Emissions and Increase Clean Energy Use*, BERKELEY ENERGY & CLIMATE INITIATIVE (2014), available at [www.law.berkeley.edu/files/ccelp/FERC\\_Report\\_FINAL.pdf](http://www.law.berkeley.edu/files/ccelp/FERC_Report_FINAL.pdf) (discussing FERC jurisdiction and numerous policy proposals).

<sup>2</sup> See, e.g., Sharon B. Jacobs, *Bypassing Federalism and the Administrative Law of Negawatts*, 100 IOWA L. REV. 885 (2015) (criticizing Order 745 as overreaching).

<sup>3</sup> *FERC v. Elec. Power Supply Ass’n*, 136 S. Ct. 760 (2016). See generally Joel B. Eisen, *Who Regulates the Smart Grid?: FERC’s Authority over Demand Response Compensation in Wholesale Electricity Markets*, 4 SAN DIEGO J. CLIMATE & ENERGY L. 69 (2013) [hereinafter *Who Regulates the Smart Grid?*] (analyzing jurisdictional issues associated with demand response).

<sup>4</sup> Demand Response Compensation in Organized Wholesale Energy Markets, Order No. 745, 134 FERC ¶ 61,187 (Mar. 15, 2011); Eisen, *Who Regulates the Smart Grid?*, *supra* note 3, at 72 (discussing Order 745). See generally Richard J. Pierce Jr., *A Primer on Demand Response and a Critique of FERC Order 745*, 102 GEO. WASH. U. J. ENERGY & ENVTL. L. 102 (2011) [hereinafter *Demand Response*] (suggesting that a reviewing court should uphold Order 745).

Reversing a D.C. Circuit decision, the Supreme Court held that FERC has authority over “demand response” (techniques by which end-use customers directly reduce consumption of electricity) in wholesale electricity markets.<sup>5</sup> The Court also held that FERC’s formula for pricing demand response at the market price — the same price paid to generators — was not arbitrary and capricious.<sup>6</sup> Using a historical analysis of modern cases and durable principles dating to the Progressive Era,<sup>7</sup> this Article concludes that the Court was correct in asserting that FERC has ample authority for Order 745, and also explains that FERC can take sweeping measures such as a “carbon adder” that would aim at the most pressing energy and environmental issues of our time.

The Federal Power Act (“FPA”) is largely intact since its 1935 enactment and did not contemplate today’s wholesale markets and other advances.<sup>8</sup> FERC therefore justifies its initiatives under its existing authorities to prevent “undue discrimination” by regulated entities in their “practices” affecting wholesale electricity rates (for convenience, this Article refers to the latter as the “practices affecting rates” clause).<sup>9</sup> FERC’s critics claimed these provisions could not be stretched to justify Order 745.<sup>10</sup> They argued that the FPA cannot be interpreted broadly to allow it to pursue goals other than achieving just and reasonable electricity rates, and that doing so for unauthorized purposes infringes on states’ regulatory authority.<sup>11</sup> In

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<sup>5</sup> *Elec. Power Supply Ass’n*, 136 S. Ct. at 767.

<sup>6</sup> *Id.*

<sup>7</sup> See *infra* Part II.

<sup>8</sup> See James J. Hoecker & Douglas W. Smith, *Regulatory Federalism and Development of Electric Transmission: A Brewing Storm?*, 35 ENERGY L.J. 71, 73 (2014); Jacobs, *supra* note 2, at 941. With respect to the wholesale markets specifically, see Emily Hammond & David B. Spence, *The Regulatory Contract in the Marketplace*, 69 VAND. L. REV. 141, 198 (2016) (noting that the wholesale markets were a “stark departure from historical practice” and not contemplated in 1935).

<sup>9</sup> See *infra* Part III (discussing these aspects of the FPA).

<sup>10</sup> See generally Jacobs, *supra* note 2.

<sup>11</sup> These mirror the ongoing arguments against the use of broad agency discretion under other statutes, such as the Environmental Protection Agency’s climate change rules. See, e.g., *Util. Air Regulatory Grp. v. EPA (UARG)*, 134 S. Ct. 2427 (2014) (overturning portions of EPA rules addressing greenhouse gas emissions); Amanda C. Leiter, *Utility Air Regulatory Group v. EPA: A Shot Across the Bow of the Administrative State*, 10 DUKE J. CONST. L. & PUB. POL’Y 59, 60 (2015) (discussing *UARG* and claiming that it “creates a presumption against reading ambiguous statutory text to grant agencies authority that is either ‘too expansive’ or ‘too expensive.’”). Other recent challenges to EPA’s interpretations of the Clean Air Act include *EPA v. EME Homer Generation, L.P.*, 134 S. Ct. 1584 (2014) (states challenged EPA’s rule regulating interstate pollution

*FERC v. EPSA*, the Court soundly rejected these and other arguments against Order 745.<sup>12</sup>

The aim of this Article is to demonstrate that the Supreme Court accurately characterized FERC's jurisdiction, and to explain the extent of FERC's authority under *FERC v. EPSA*. To that end, the Article uses a historical approach that examines the evolution of the law over the past 100 years in three distinct eras: railroad regulation of the early 1900s, where the "practices affecting rates" language originated; regulation of the electric utility industry under the FPA from 1935 through the industry transition to competition beginning in the 1980s; and regulation in the modern market era. No analysis to date has taken such a comprehensive approach to understanding FERC's authority, nor aimed to reconcile all of this law. This Article fills this gap by providing four guiding principles to enable courts and policymakers to apply the "directly affecting" standard in individual situations involving FERC's jurisdiction. Over time, the interpretation of "practices affecting rates" has traced a distinctive arc, featuring flexibility about conduct being regulated. Originally, agencies used it to remedy individual firms' discriminatory activities — for example, railroads' secret preferences.<sup>13</sup> Following the FPA's enactment, the focal point for defining "practices" shifted to determining how comprehensively rate-setting tariffs should describe utility operations.<sup>14</sup> Today, as the Court has acknowledged, "practices affecting rates" means the terms, conditions, and rules that govern wholesale markets.<sup>15</sup> FERC's role has shifted from overseeing whether an individual utility harmed customers, to whether market operations do. Under *FERC v. EPSA*, this extends FERC's reach to a wide range of entities whose conduct affects wholesale rates directly and significantly.

This Article discusses how *FERC v. EPSA*'s "directly affecting" language empowers FERC to regulate those practices that affect wholesale markets directly and significantly, or are integral to the markets' proper functioning. It adds four factors to the Court's analysis for courts and policymakers to consider in applying this standard. This recognizes that FERC's expansive "practices affecting rates" authority is well grounded in 100 years of history. While the

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transport), and *White Stallion Energy Ctr., LLC v. EPA*, 748 F.3d 1222 (D.C. Cir. 2014) (states challenged EPA's approach to regulating mercury emissions).

<sup>12</sup> *FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 775-82 (2016).

<sup>13</sup> See *infra* Part II.A (discussing this body of law).

<sup>14</sup> See *infra* Part II.B (discussing the interpretation of the FPA during this period).

<sup>15</sup> See *infra* Part III (discussing the modern view of FPA provisions).

“practices” being regulated have changed, the prevailing trend over the years has been regulatory growth and breadth, not shortcomings and limits. *FERC v. EPSA* highlights a resilient statute: the FPA’s terms are not frozen in amber, as the statute has adapted to changing market realities. Therefore, the Court has properly confirmed that the FPA has flexibility to address modern developments in the electric grid.

As a prudential matter, FERC might not advocate certain policies to transform the electric grid; backlash to some of its reform initiatives has been severe, prompting agency retrenchment and reticence.<sup>16</sup> *FERC v. EPSA*’s upholding of Order 745 shows that FERC can boldly pursue policy goals (such as promoting reduced electricity consumption) going beyond the pursuit of economic efficiency in wholesale markets. It can even take an “environmental” action — such as addressing climate change through a carbon adder<sup>17</sup> — if it has a direct relationship to wholesale rates. Moreover, it does not matter that its initiatives might impinge on state authority. The Supreme Court has long settled that FERC can act if it does not engage in direct regulation of matters expressly reserved to the states.<sup>18</sup> *FERC v. EPSA* reiterated this central principle and held that it did not invalidate Order 745.<sup>19</sup>

This confirmation of FERC’s broad authority brings clarity to energy law federalism. The balance of power between the states and FERC has been the subject of considerable recent uncertainty. The FPA defines jurisdiction in terms of separate and exclusive “retail” and “wholesale” spheres, with a complex matrix of actions regulated either by FERC or

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<sup>16</sup> See, e.g., DAVID E. McNABB, PUBLIC UTILITIES: MANAGEMENT CHALLENGES FOR THE 21ST CENTURY 230-31 (2005) (discussing the political opposition to the Standard Market Design proposal); John S. Moot, *Subsidies, Climate Change, Electric Markets and the FERC*, 35 ENERGY L.J. 345, 347 (2014); Gerald Norlander, *May the FERC Rely On Markets to Set Electric Rates?*, 24 ENERGY L.J. 65, 65-66 (2003) (discussing the SMD’s features).

<sup>17</sup> For a discussion of the features of a carbon adder, see Weissman & Webb, *supra* note 1, at 4.

<sup>18</sup> See *infra* Part III.C (discussing cases reaching this conclusion).

<sup>19</sup> *FERC v. Elec. Power Supply Ass’n*, 136 S. Ct. 760, 776 (2016):

FERC regulation does not run afoul of § 824(b)’s proscription just because it affects — even substantially — the quantity or terms of retail sales. It is a fact of economic life that the wholesale and retail markets in electricity, as in every other known product, are not hermetically sealed from each other. To the contrary, transactions that occur on the wholesale market have natural consequences at the retail level. And so too, of necessity, will FERC’s regulation of those wholesale matters.

by the states.<sup>20</sup> In today's electric power system, electric current flows across state lines.<sup>21</sup> Inevitably, then, jurisdictional tensions have arisen — even though FERC and the states nominally remain within their “assigned spheres.”<sup>22</sup> This leads some to deem the situation intractable, calling the FPA's language drawing sharp jurisdictional boundaries outmoded.<sup>23</sup>

As the Court has determined, the “practices affecting rates” language can alleviate this tension. This conclusion follows from a long line of judicial decisions on “practices” predating *FERC v. EPSA* that yield detailed limits on what FERC and the states can regulate, giving a rich context to the distinction between “retail” and “wholesale.” The approach outlined in this Article can go a long way toward deciding which responsibilities are best assumed by each level of government, or by both concurrently. This can be accomplished by applying its limiting principles in a manner that gives sufficient guidance to federal and state regulators, utilities, and consumers.

Part I examines the FPA's structure and text, the rise of the wholesale electricity markets, and the jurisdictional challenges, using the example of demand response. Part II discusses the Progressive Era origins of “undue discrimination” and “practices affecting rates” and their interpretation before the emergence of the modern wholesale markets. Part III discusses the modern era and the foundation for interpreting “practices affecting rates” and discrimination comparably, arguing for and describing the standard that allows FERC to govern practices directly and significantly affecting wholesale market rates. To provide guidance to courts and policymakers for handling contentious cases, Part IV articulates four factors for elaborating on the standard, and also suggests how to apply the standard in challenging situations when preemption questions arise.

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<sup>20</sup> Charts detailing federal, state, and concurrent jurisdiction under the FPA illustrate this complexity. See Scott Hempling, *Electricity Jurisdiction: Actions by Market Participants*, SCOTT HEMPLING L., [http://www.scotthemplinglaw.com/files/attachments/elec\\_jurisdiction\\_hempling\\_020514.pdf](http://www.scotthemplinglaw.com/files/attachments/elec_jurisdiction_hempling_020514.pdf) (last visited Jan. 22, 2016).

<sup>21</sup> This interconnectedness subjects most electricity transmission to federal regulation under the FPA. 16 U.S.C. § 824(b) (2012) (claiming federal jurisdiction over “transmission of electric energy in interstate commerce”); *FPC v. Fla. Power & Light Co.*, 404 U.S. 453, 454 (1972) (confirming federal jurisdiction on this basis).

<sup>22</sup> See *Nw. Cent. Pipeline Corp. v. State Corp. Comm'n of Kan.*, 489 U.S. 493, 515 n.12 (1989).

<sup>23</sup> Jacobs, *supra* note 2, at 940-41 (stating that, “the federalism boundaries drawn in 1935 in the FPA may no longer be appropriate in today's world”).

## I. THE CORE OF A RESILIENT APPROACH TO THE FPA

Before *FERC v. EPSA*, talk of the FPA's resilience and adaptability seemed inapt, considering its core provisions have not changed substantially in eighty years. The FPA's division of authority between FERC and the states has received the sharpest criticism. The FPA closed the "Attleboro gap" and addressed the inability of state public utility commissions ("PUCs") to regulate large interstate holding companies,<sup>24</sup> giving the Federal Power Commission ("FPC"), FERC's predecessor, authority over "all wholesale sales in interstate commerce."<sup>25</sup> It divides authority rigidly between FERC and the states — FERC regulates at "wholesale" and the states at "retail."<sup>26</sup> The core jurisdictional provision, section 201, extends federal jurisdiction to "public utilities"<sup>27</sup> engaged in "the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce."<sup>28</sup> FERC has exclusive jurisdiction over

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<sup>24</sup> The 1927 Supreme Court decision in *Pub. Util. Comm'n of R.I. v. Attleboro Steam & Elec. Co.*, 273 U.S. 83, 89-90 (1927), recognized constitutional limits on states regulating interstate energy transactions. The Court concluded that neither Massachusetts nor Rhode Island had the power to regulate an interstate transaction, and "if such regulation is required it can only be attained by the exercise of the power vested in Congress." *Id.* at 90; see also *New York v. FERC*, 535 U.S. 1, 6 (2002) ("When it enacted the FPA in 1935, Congress authorized federal regulation of electricity in areas beyond the reach of state power, such as the gap identified in *Attleboro*, [and] it also extended federal coverage to some areas that previously had been state regulated."); Boyd, *supra* note 1, at 1629-30 (noting that, "[w]hile . . . holding companies emerged in part to facilitate the building of regional systems, they also provided a means of escaping rate regulation by states and thus became an object of intense regulatory scrutiny and concern during the Great Depression as utilities went bankrupt across the country. In 1935, Congress enacted two statutes to deal with the increasingly interstate nature of the electricity industry and the abuses of the holding companies").

<sup>25</sup> *Fed. Power Comm'n v. S. Cal. Edison Co.*, 376 U.S. 205, 216 (1964).

<sup>26</sup> Joel B. Eisen, *Regulatory Linearity, Commerce Clause Brinkmanship, and Retrenchment in Electric Utility Deregulation*, 40 WAKE FOREST L. REV. 545, 549 (2005) [hereinafter *Regulatory Linearity*].

<sup>27</sup> The Federal Power Act's definition of a "public utility" is not the same as the common understanding of a "utility." The Act defines a "public utility" as "any person who owns or operates facilities subject to the jurisdiction of the Commission," that is, "any person who owns or operates" facilities for the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce. 16 U.S.C. § 824(e) (2012).

<sup>28</sup> The FPA granted the Federal Power Commission ("FPC"), now FERC, authority over the rates and conditions for the interstate sale and transmission of electricity at wholesale (sales before resale to eventual consumers). 16 U.S.C. § 824(b) (claiming federal jurisdiction over "transmission of electric energy in interstate commerce"); *FPC v. Fla. Power & Light Co.*, 404 U.S. 453, 461-63 (1972) (affirming

wholesale sales of electricity and transmission in interstate commerce; states have jurisdiction over retail sales.<sup>29</sup>

Professor Hannah Wiseman calls this bright line “antiquated,”<sup>30</sup> arbitrary and unworkable in today’s interconnected, interstate electric grid.<sup>31</sup> Compared to the more dynamic relationship between the states and the federal government prevalent under other modern regulatory statutes,<sup>32</sup> assigning separate and exclusive regulatory spheres to FERC and the states appears to reflect “stagnant vestiges” of the long discarded approach of “dual federalism.”<sup>33</sup> Calls for new approaches to energy law federalism abound.<sup>34</sup>

That is one story, but there is another that resonates in *FERC v. EPSA*: a story of statutory resilience and flexibility that addresses and settles many core questions. The foundation of this approach is that interpretations of the FPA’s two central regulatory provisions have shifted steadily over time to accommodate new developments in the electric utility industry, and to empower FERC to regulate them. These two provisions are FPA sections 205 and 206. Section 205 mandates that all wholesale rates must be just and reasonable,<sup>35</sup> and prohibits utilities from granting any “undue prejudice or disadvantage.” Section 206 announces that if “any rule, regulation, practice, or contract affecting such rate, charge, or classification is

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FPC jurisdiction on this basis).

<sup>29</sup> FERC’s authority is plenary, and extends to all sales in interstate commerce except those explicitly made subject to regulation by the states. *See Gulf States Util. Co. v. Fed. Power Comm’n*, 411 U.S. 747, 758 (1973).

<sup>30</sup> Hannah J. Wiseman, *Moving Past Dual Federalism to Advance Electric Grid Neutrality*, 100 IOWA L. REV. BULL. 97, 99 (2015).

<sup>31</sup> *Id.* at 97 (noting that, “[e]lectricity has changed in so many ways since the passage of the Federal Power Act (“FPA”) — a 1935 statute that allocated jurisdiction over electricity between states and the federal government — that the Act’s division of state and federal authority is increasingly irrelevant and artificial”).

<sup>32</sup> For example, there is a rich body of scholarship on the “cooperative federalism” approach to environmental law, which implements an interactive relationship between the U.S. Environmental Protection Agency and the states. *See, e.g.,* Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U. L. REV. 1097 (2009) (discussing the origins of environmental federalism and the contemporary approach); Emily Hammond & David L. Markell, *Administrative Proxies for Judicial Review: Building Legitimacy from the Inside-Out*, 37 HARV. ENVTL. L. REV. 313 (2013).

<sup>33</sup> Wiseman, *supra* note 30, at 97.

<sup>34</sup> *See, e.g.,* Hari M. Osofsky & Hannah J. Wiseman, *Dynamic Energy Federalism*, 72 MD. L. REV. 773 (2013) (proposing a “novel” approach to the subject).

<sup>35</sup> 16 U.S.C. § 824d (2012). All rates charged by any public utility “in connection with the . . . sale of electric energy subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges” are required to be “just and reasonable.” *Id.*

unjust, unreasonable, unduly discriminatory or preferential,” FERC must “determine the just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force, and shall fix the same by order.”<sup>36</sup>

The flexible approach to the FPA has several fundamental attributes. The touchstone for regulatory intervention is remedying anti-competitive “discrimination,” the umbrella term for activities harming customers of regulated firms. Since the 1900s, regulators have consistently viewed discrimination in context, focusing on whether firms’ conduct — “practices” — harms customers, rather than enumerating specific prohibited practices. The nature of these “practices” has changed over time. Agencies have interpreted regulated “practices” broadly, but with some limits, the most significant being a direct and significant relationship to the rates for service subject to agency control.

As the electric utility industry has transformed, FERC’s regulatory approach has as well. In the past several decades, wholesale markets for electricity have grown and substantially displaced price regulation of individual firms.<sup>37</sup> This transformation began in the 1980s with the rise of independent power generators and competition to entrenched utilities.<sup>38</sup> It accelerated when FERC issued major orders, Orders 888,<sup>39</sup> 889,<sup>40</sup> and 2000,<sup>41</sup> aimed at preventing transmission line owners from using their monopoly power to prevent others from using the lines.<sup>42</sup> Regional grid operators known as “independent system

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<sup>36</sup> *Id.* § 824e(a). Similar language in section 1(b) of the Natural Gas Act (“NGA”) also authorizes FERC jurisdiction to ensure that “practices . . . affecting rates” are just and reasonable, and the statutes and decisions under them are read *in pari materia*. *Nw. Cent. Pipeline Corp. v. State Corp. Comm’n of Kan.*, 489 U.S. 493, 506 (1989) (citing 15 U.S.C. § 717c, 717d).

<sup>37</sup> See generally Hammond & Spence, *supra* note 8.

<sup>38</sup> Eisen, *Regulatory Linearity*, *supra* note 26, at 549-50 (discussing the impact of Public Utility Regulatory Policies Act (“PURPA”) on stimulating the growth of competition to established generators and noting that it “essentially invented a market for generation where none previously existed”).

<sup>39</sup> Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 18 C.F.R. pts. 35, 385 (1996).

<sup>40</sup> Open-Access Same-Time Information System (Formerly Real-Time Information Networks) and Standards of Conduct, Order No. 889, 18 C.F.R. pt. 37 (1996).

<sup>41</sup> Regional Transmission Organizations, Order No. 2000, 18 C.F.R. pt. 35 (2000).

<sup>42</sup> Order 888 operated on a principle of comparability: the belief that owners of the transmission grid should offer third parties access to the grid on the same or comparable terms and conditions as the transmission owner’s own use of the system. See Eisen, *Regulatory Linearity*, *supra* note 26, at 550-51; *infra* Part III.B.

operators” (“ISOs”) and “regional transmission organizations” (“RTOs”)<sup>43</sup> now administer several different types of wholesale markets for electricity,<sup>44</sup> under FERC oversight, and seven ISO/RTOs<sup>45</sup> now serve over one-half of the nation and provide two-thirds of the nation’s electricity.<sup>46</sup> This is far different from the system that prevailed for decades after the FPA’s enactment. Then, vertically integrated investor-owned utilities dominated the industry, providing monopoly service to their customers by generating, transmitting and supplying power to their customers, with little need for wholesale power transactions.<sup>47</sup>

In the market-based system, the lens through which FERC views its oversight role has broadened to an industry-wide focus. As it did for “undue discrimination,” the Court has now confirmed that FERC can control “practices” on an industry-wide basis, with appropriate limits.

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<sup>43</sup> Order 888 encouraged (but did not require) the formation of regional Independent System Operators (“ISOs”) to help manage the provision of transmission services and oversee wholesale power markets. 18 C.F.R. pts. 35, 385 (establishing requirements for ISOs). Order 2000 continued this transformation by encouraging RTOs’ formation and setting forth specific requirements for an entity to qualify as an RTO. 18 C.F.R. pt. 35; Eisen, *Regulatory Linearity*, *supra* note 26, at 551-52.

<sup>44</sup> ISO/RTOs manage energy, capacity, and ancillary services markets. Energy markets are designed to ensure that enough generation plants are online and able to produce electricity on a day-ahead to one-hour-ahead basis. JAQUELIN COCHRAN ET AL., NAT’L RENEWABLE ENERGY LAB., MARKET EVOLUTION: WHOLESale ELECTRICITy MARKET DESIGN FOR 21ST CENTURY POWER SYSTEMS, at vi-vii (2013), available at <http://www.nrel.gov/docs/fy14osti/57477.pdf>. Ancillary services markets allow the ISO/RTO to maintain a portfolio of backup generation in case of unexpectedly high demand or if contingencies arise. Joel B. Eisen, *Distributed Energy Resources*, “Virtual Power Plants,” and the Smart Grid, 7 HOUS. ENVTL. & ENERGY L. & POL’Y J. 191, 203 (2012) (discussing “regulation” and the potential for demand response to participate in ancillary services markets). Forward capacity markets aim for resource “adequacy”: to ensure that there is sufficient generating capacity over the long term to meet projected demand, by providing financial incentives for suppliers to keep generating plants online and to induce new investment in generation. COCHRAN ET AL., *supra*, at vi.

<sup>45</sup> The difference between RTO and ISO is today largely semantic, and this Article will use the term “ISO/RTO” to encompass the two. See generally Charles H. Koch, Jr., *Collaborative Governance in the Restructured Electricity Industry*, 40 WAKE FOREST L. REV. 589 (2005) (discussing comparable ISO and RTO governance models).

<sup>46</sup> See Eisen, *Regulatory Linearity*, *supra* note 26, at 551; *Electric Power Markets: National Overview*, FED. ENERGY REG. COMMISSION, <http://www.ferc.gov/market-oversight/mkt-electric/overview.asp> (last updated Dec. 21, 2015); *The Role of ISOs and RTOs*, ISO/RTO COUNCIL, <http://www.isorto.org/about/Role> (last visited Jan. 24, 2016).

<sup>47</sup> See Eisen, *Regulatory Linearity*, *supra* note 26, at 549-50 (noting the lack of a wholesale market before the 1990s); Hammond & Spence, *supra* note 8, at 150; Hoecker & Smith, *supra* note 8, at 75.

Yet as *FERC v. EPSA* observed,<sup>48</sup> “practices” has a broad meaning: a practice is “how a company does business,” a “method, procedure, process, or rule employed or followed by a company in the pursuit of its objectives.”<sup>49</sup> Electricity is a universal commodity, and nearly every business “practice” has a connection to it. Building a shoe manufacturing plant in Massachusetts affects how much electricity is needed on the New England electric grid, but it would be serious overreaching for FERC to assert responsibility for issuing the plant’s building permit. “Practices” can undoubtedly have many meanings, and FERC cannot use its breadth to regulate activities unconnected to the markets.

Fortunately, limits on FERC’s authority over “practices affecting rates” have been defined in appellate court cases and now confirmed by the Court. Demand response — payments to consumers to reduce electricity consumption — was an excellent candidate to be this issue’s acid test. Demand response is not a new invention,<sup>50</sup> as it has been around for decades. In its present form, FERC is allowing intermediaries<sup>51</sup> to bid demand reductions into the wholesale electricity markets it controls as the equivalent of energy or capacity (the ability to provide energy when called upon). “By pulling together demand reductions from a number of retail customers, an aggregator enables individual customers to take part in the market when they otherwise could not do so.”<sup>52</sup>

What made demand response in the wholesale markets contentious is not what it is so much as what it is not. It forced a judgment about whether markets should trade something other than commodity energy. Demand response providers are not “public utilities” under

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<sup>48</sup> *FERC v. Elec. Power Supply Ass’n*, 136 S. Ct. 760, 774 (2016).

<sup>49</sup> *Business Practice*, BUSINESSDICTIONARY, <http://www.businessdictionary.com/definition/business-practice.html> (last visited Jan. 24, 2016).

<sup>50</sup> Eric Hirst, *Price-Responsive Demand in Wholesale Markets: Why Is So Little Happening?*, 14 *ELECTRICITY J.* 25, 26-27 (2001). Utilities began demand reduction programs known as “curtailment” and “peak shaving” in the 1980s and 1990s. Jon Wellinghoff & David E. Morenoff, *Recognizing the Importance of Demand Response: The Second Half of the Wholesale Electric Market Equation*, 28 *ENERGY L.J.* 389, 394 (2007).

<sup>51</sup> FERC’s Order 745 applies only to demand response bid into wholesale energy markets by intermediaries known as “aggregators” or “curtailment service provider[s]” (“CSPs”). Demand Response Compensation in Organized Wholesale Energy Markets, Order No. 745, 134 FERC ¶ 61,187 (Mar. 15, 2011).

<sup>52</sup> “Most residential customers cannot interact directly with the wholesale markets, as market rules in RTOs and ISOs” require bidders to offer a minimum amount of energy, which forces small-scale customers to bid through CSPs. Eisen, *Who Regulates The Smart Grid?*, *supra* note 3, at 81.

the FPA,<sup>53</sup> so allowing FERC to control them appeared to expand its reach beyond jurisdictional entities. Moreover, demand response is not merely a wholesale market resource, because in its aggregated form it represents the sum of numerous consumption reduction decisions. Looked at one way, demand response is the bidding of a resource into wholesale markets. From another, the consumption reductions can affect retail rates, which states set. As FERC put it delicately, jurisdiction over “demand response is a complex matter that lies at the confluence of state and federal jurisdiction.”<sup>54</sup> Opponents raised other policy objections, viewing demand response in wholesale markets as inferior to true marginal cost pricing of electricity.<sup>55</sup> Unfortunately, the electricity industry, unlike most others, does not have “dynamic pricing,”<sup>56</sup> which has not been implemented to any great degree.<sup>57</sup>

FERC justified Order 745 (which required aggregators bundling demand reductions and bidding them into wholesale energy markets to be paid the same market price as generators<sup>58</sup>) and related agency

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<sup>53</sup> Demand response providers do not own or operate “facilities subject to the jurisdiction of the Commission.” The FPA’s definition of a jurisdictional “public utility,” see *supra* note 27, is not the same as the common understanding of a “utility.” The Act defines a “public utility” as “any person who owns or operates facilities subject to the jurisdiction of the Commission,” that is, “any person who owns or operates” facilities for the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce. 16 U.S.C. § 824(e) (2012). Demand response providers do not satisfy this test.

<sup>54</sup> *Elec. Power Supply Ass’n v. FERC*, 753 F.3d 216, 219 (D.C. Cir. 2014), *rev’d and remanded* *FERC v. Elec. Power Supply Ass’n*, 136 S. Ct. 760 (2016) (quoting Order 745).

<sup>55</sup> James Bushnell et al., *When It Comes To Demand Response, Is FERC Its Own Worst Enemy?*, 22 *ELECTRICITY J.* 9, 10 (2009) (claiming that demand response programs “threaten to crowd out far superior approaches”).

<sup>56</sup> *Id.* at 11.

<sup>57</sup> In 2014, only about one percent of American residential consumers were using any form of dynamic pricing rates. FED. ENERGY REG. COMM’N, 2014 ASSESSMENT OF DEMAND RESPONSE AND ADVANCED METERING, STAFF REPORT 31 (2014), available at <http://www.ferc.gov/legal/staff-reports/2014/demand-response.pdf>; see Paul L. Joskow & Catherine D. Wolfram, *Dynamic Pricing of Electricity*, 102 *AM. ECON. REV.* 381, 383-84 (2012) (discussing the slow adoption of dynamic pricing); Matthew L. Wald, *Power Savings of Smart Meters Prove Slow to Materialize*, *N.Y. TIMES* (Dec. 5, 2014), <http://www.nytimes.com/2014/12/06/business/energy-environment/power-savings-of-smart-meters-prove-slow-to-materialize.html>.

<sup>58</sup> Demand Response Compensation in Organized Wholesale Energy Markets, Order No. 745, 134 FERC ¶ 61,187 (Mar. 15, 2011); Eisen, *Who Regulates The Smart Grid?*, *supra* note 3, at 75. Demand response providers are only compensated when it is cost effective to do so, under a “net-benefits test” developed by each ISO/RTO. Pierce, *Demand Response*, *supra* note 4.

proceedings<sup>59</sup> on the pillars of its FPA authority: the power to decide just and reasonable rates, and the power to remedy discriminatory practices affecting wholesale rates.<sup>60</sup> Its stated purpose was to propose “a remedy to concerns that current compensation levels inhibited meaningful demand-side participation.”<sup>61</sup> FERC judged that while demand response is not energy, it compares to it because it has numerous benefits for energy markets, such as improved reliability, reduced consumption, and reductions in carbon emissions.<sup>62</sup>

This looked to some like a power grab, and sparked considerable tension between FERC and its opponents (organizations representing generators, and some states). The D.C. Circuit’s *EPSA* decision held that demand response was solely a retail-level activity, that FERC had no authority over it, and that giving FERC jurisdiction over demand response would have no boundaries; if Order 745 stood, FERC could regulate the steel and labor markets if it so chose.<sup>63</sup> In the wake of the D.C. Circuit’s *EPSA* decision, there was considerable uncertainty about demand response participation in wholesale markets. Some believed that FERC had overreached and can only promote electric grid innovation with new or revamped statutory authority.<sup>64</sup>

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<sup>59</sup> Order 745 built on the foundation of FERC’s Order 719, which required ISOs and RTOs to revise their tariffs and allow demand response aggregator participation in the wholesale markets. Wholesale Competition in Regions with Organized Electric Markets, Order 719, 18 C.F.R. pt. 35 (2008) [hereinafter Order 719].

<sup>60</sup> 134 FERC ¶ 61,187, para. 112; *see also* Order Conditionally Granting Market-Based Rate Authorization and Providing Guidance, 130 FERC ¶ 61,031, para. 32 (2010) (stating that FERC was construing demand response as a “practice that affects rates” in holding that EnergyConnect, a demand response provider, was subject to FERC jurisdiction); Order Assessing Civil Penalty, 144 FERC ¶ 61,164, para. 71 (2013) (holding that an individual’s fraudulent conduct in the ISO-New England demand response market was jurisdictional, using the same rationale).

<sup>61</sup> 134 FERC ¶ 61,187, para. 1. At one point, FERC had attempted to regulate demand response as a “sale” under FPA section 201, but by 2011, recognizing that no electricity was actually being sold, it had reversed its position. Order Conditionally Granting Market-Based Rate Authorization and Providing Guidance, 130 FERC ¶ 61,031, para. 31 (2010).

<sup>62</sup> Eisen, *Who Regulates The Smart Grid?*, *supra* note 3, at 71 (mentioning improved reliability and environmental impacts such as the reduced need to run polluting power plants).

<sup>63</sup> *Elec. Power Supply Ass’n v. FERC*, 753 F.3d 216, 221 (D.C. Cir. 2014), *rev’d and remanded* *FERC v. Elec. Power Supply Ass’n*, 136 S. Ct. 760 (2016). In an article published in 2007, several years before Order 745’s issuance and well before the *EPSA* decision, former FERC Chairman Jon Wellinghoff anticipated and refuted this slippery slope argument, referring to some of the case law discussed *infra* Part III. Wellinghoff & Morenoff, *supra* note 50, at 404.

<sup>64</sup> *See generally* Jacobs, *supra* note 2 (terming Order 745 “bypassing federalism”).

A close look at the law developed over the past 100 years supports the Court's reading of the FPA. The Supreme Court's broad reading of "practices affecting rates" that empowers FERC to regulate demand response and other matters directly affecting the wholesale markets is no radical departure from the statutory text. To the contrary, it is a logical — and inescapable — conclusion from the lessons of a body of law developed over the past century. *FERC v. EPSA* is consistent with the focus on firms' conduct that has undergirded the approach to controlling regulated industries, demonstrating the regulatory structure's continuing adaptability. As the Court has now acknowledged, the statutory mandate continues unchanged, but has adapted to suit market realities.

## II. THE FOUNDATION OF MODERN AUTHORITY: "UNDUE DISCRIMINATION" AND "PRACTICES AFFECTING RATES" FROM THE RAILROAD ERA TO THE DAWN OF ELECTRIC INDUSTRY COMPETITION

The origins of FERC's authority date to the Progressive Era. The "practices affecting rates" language originated in the 1906 Hepburn Act, a railroad regulation law that added section 15 to the Interstate Commerce Act ("ICA"),<sup>65</sup> the forerunner of FPA section 205<sup>66</sup> and nearly identical provisions in other regulatory statutes. After discussing that era, this Part turns to the time period beginning with the FPA's 1935 enactment, spanning the period of regulation of vertically integrated utilities to the rise of industry competition in the late 1980s and early 1990s. The final time period, discussed in the next Part, continues from there to the present day. Only after looking at all three can we arrive at a full picture of the modern view of "undue discrimination" and "practices affecting rates."

### A. *Addressing Discriminatory Practices in Progressive Era Railroad Regulation*

Federal railroad laws created a regulatory juggernaut with strong federal powers. These statutes included the Interstate Commerce Act of 1887 ("ICA"), which established the Interstate Commerce Commission ("ICC"), and three Progressive Era statutes that strengthened it: the Elkins Act of 1903, the Hepburn Act, and the

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<sup>65</sup> Hepburn Act of 1906 § 4, 34 Stat. 584, 589-90, 49 U.S.C. § 15 (repealed 1978).

<sup>66</sup> *Global Crossing Telecomms., Inc. v. Metrophones Telecomms., Inc.*, 550 U.S. 45, 49 (2007) (noting that provisions of the Communications Act are nearly identical as well); Joshua Z. Rokach, *FERC's Jurisdiction Under Section 205 of the Federal Power Act*, 15 ENERGY L.J. 83, 83 (1994).

Mann-Elkins Act of 1910.<sup>67</sup> This government-administered scheme of regulation is now long gone from the national landscape, but the Hepburn Act and cases decided after its enactment developed two fundamental attributes of the “practices affecting rates” language. The first was that federal agencies could take action against a wide variety of discriminatory practices of regulated firms. The second was that statutes gave agencies broad discretion, but that discretion had limits.

The ICA represented a shift from the common law approach to regulation of common carriers.<sup>68</sup> At common law, common carriers<sup>69</sup> have a “duty to serve”: they must carry all traffic, or face legal action for refusing to do so. As early as the 17th century, common carrier rates were required to be “reasonable.” This followed from the duty to serve, as a common carrier could not pick and choose customers by quoting much higher rates to some customers than to those similarly situated.<sup>70</sup> However, the “reasonableness” requirement was ineffective in preventing rate discrimination, due to proof problems and other weaknesses.<sup>71</sup>

“Reasonable” railroad rates were never uniform. Indeed, basic economics of 19<sup>th</sup> and 20<sup>th</sup> century railroad operation virtually dictated non-uniformity,<sup>72</sup> and so the ICA’s response was the lodestar

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<sup>67</sup> See Mann-Elkins Act of 1910, 36 Stat. 539; Hepburn Act of 1906, 34 Stat. 584; Elkins Act, 32 Stat. 847 (1903); Interstate Commerce Act of 1887, 24 Stat. 379. See generally Herbert Hovenkamp, *Regulatory Conflict in the Gilded Age: Federalism and the Railroad Problem*, 97 YALE L.J. 1017 (1988) (discussing railroad regulation laws).

<sup>68</sup> Thomas W. Merrill, *The Interstate Commerce Act, Administered Contracts, and the Illusion of Comprehensive Regulation*, 95 MARQ. L. REV. 1141, 1141-42 (2012) [hereinafter *The Interstate Commerce Act*] (noting the ICA’s institution of differences between ordinary contracts governing transportation in the common law regime, and tariffs in the statutory, administrative regime).

<sup>69</sup> “Common carrier” is the well-known term that refers to those entities that hold themselves out to the public to carry goods or persons for hire, as distinguished from “private carriers.” AM. COMMERCE ASS’N, *LAW OF COMMON CARRIERS*, ABRIDGED 1-5 (1918). Railroads were incorporated under state statutes, making them common carriers. *Id.* at 17.

<sup>70</sup> DEWITT CLINTON MOORE, *A TREATISE ON THE LAW OF CARRIERS* 160-61 (1914); J. Walter Lord, *A Brief Review of the Subject of Federal Railroad Regulation*, 181 N. AM. REV. 754, 755 (1905).

<sup>71</sup> See Hovenkamp, *supra* note 67, at 1046; Lord, *supra* note 70, at 755.

<sup>72</sup> EMORY RICHARD JOHNSON & THURMAN WILLIAM VAN METRE, *PRINCIPLES OF RAILROAD TRANSPORTATION* 338-40 (1921) (discussing the reasons for differing railroad rates over different distances in depth); Hovenkamp, *supra* note 67, at 1035-37 (explaining this phenomenon); see also Sam Kalen, *Muddling Through Modern Energy Policy: The Dormant Commerce Clause and Unmasking the Illusion of an Attleboro Line*, \_\_\_ N.Y.U. ENVTL. L.J. \_\_\_ (forthcoming 2016) (manuscript on file with author) (observing that two different markets developed and states facilitated discrimination

of “unjust” and “unreasonable” rates.<sup>73</sup> Under the ICA, the agency could redress rates varying too dramatically from those offered to similar shippers in similar circumstances, without the procedural barriers of common law actions.<sup>74</sup>

### 1. Remediating Discrimination: The Hepburn Act

Besides excessive rate differentials, unlawful discrimination by railroads was understood at the time to include excessive rate differences and other preferences — railroad pooling, secret rebates, and drawbacks.<sup>75</sup> Pools — cartels in which railroad members divided traffic and revenues among themselves — were not universally viewed as evil; indeed, they had been the subject of “a great debate waged among railroad economists and policymakers over whether [they] . . . should be legal.”<sup>76</sup> The ICA prohibited pooling, but by the early 1900s the practice had not completely diminished. Other practices, including drawbacks (rebates to favored shippers, plus rebates on rates paid by all other shippers)<sup>77</sup> and rebates were widely criticized as

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in the short-haul market).

<sup>73</sup> See G. Edward White, *Allocating Power Between Agencies and Courts: The Legacy of Justice Brandeis*, 1974 DUKE L.J. 195, 199-200, 202 (discussing the political development of the “just and reasonable” rate standard in the Hepburn Act).

<sup>74</sup> James B. Speta, *Supervising Discrimination: Reflections of the Interstate Commerce Act in the Broadband Debate*, 95 MARQ. L. REV. 1195, 1198 (2012) (“[T]he core concern in the nondiscrimination area has been to maintain equality of pricing for shipments subject to substantially similar costs and competitive conditions, while permitting carriers to introduce differential pricing where dissimilarities in those key variables exist.” (quoting *Sea-Land Serv., Inc. v. ICC*, 738 F.2d 1311, 1317 (D.C. Cir. 1984))).

<sup>75</sup> There is an extensive literature on these unfair practices, much of it discussing the use of these practices by John D. Rockefeller’s Standard Oil Company, but also referring to the practices as engaged in by other railroads. See, e.g., *Standard Oil Co. v. United States*, 221 U.S. 1, 42-43 (1911); IDA M. TARBELL, *THE HISTORY OF THE STANDARD OIL COMPANY* (1904); CHARLES RICHARD VAN HISE, *CONCENTRATION AND CONTROL: A SOLUTION OF THE TRUST PROBLEM IN THE UNITED STATES* 226 (1921); DANIEL YERGIN, *THE PRIZE: THE EPIC QUEST FOR OIL, MONEY & POWER* 39 (1991) (discussing Standard Oil’s controversial use of rebates and drawbacks); Lord, *supra* note 70; Michael Reksulak & William F. Shughart II, *Of Rebates and Drawbacks: The Standard Oil (N.J.) Company and the Railroads*, 38 REV. INDUS. ORG., 267, 280-81 (2011).

<sup>76</sup> Hovenkamp, *supra* note 67, at 1039-40 (noting that prominent economists and lawyers argued that pooling was essential to the railroads’ survival).

<sup>77</sup> YERGIN, *supra* note 75, at 39; Reksulak & Shughart II, *supra* note 75, at 280-81 (describing Standard Oil’s drawback practices). For an interesting argument that drawbacks were actually justified, see generally Daniel A. Crane, *Were Standard Oil’s Railroad Rebates and Drawbacks Cost Justified?*, 85 S. CAL. L. REV. 559 (2012).

anticompetitive.<sup>78</sup> Rebates came in several different forms, including “personal” discrimination (rebates to large shippers in exchange for their business) and rebates extended by vertically integrated railroads to their own parent or subsidiary firms.<sup>79</sup> Another activity viewed as problematic was abuse relating to private railroad cars.<sup>80</sup> Railroads did not keep a permanent supply of cars needed for shippers’ use. Independent companies kept them and provided them as necessary.<sup>81</sup> These firms faced no federal regulation, so problems arose, ranging from simple extortion to allotments of cars that favored some shippers over others, to secret rebates on private car charges.<sup>82</sup>

Opposition to secret preferences was a strong driver of federal regulation. The Elkins Act strengthened the ICA by ending rebates,<sup>83</sup> but this was ineffective to end their pervasiveness, because the ICC lacked enforcement power.<sup>84</sup> The result of a contentious Congressional debate and forceful personal advocacy by President Roosevelt for more federal power<sup>85</sup> was the 1906 Hepburn Act. That law contained versions of three types of power that became common to regulatory agencies: power to set maximum — though not minimum — rates under the “just and reasonable” standard;<sup>86</sup> power

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<sup>78</sup> Hovenkamp, *supra* note 67, at 1046 (noting that railroads’ preferences were opposed by “[n]early every person who wrote about railroads in the nineteenth and early twentieth century”).

<sup>79</sup> *Id.* at 1047; Reksulak & Shughart II, *supra* note 75, at 280-81.

<sup>80</sup> A 1905 article listed “private-car abuse” as one of three railroad “evils alleged by the shipping public to be prevalent, and which call for correction,” the other two being “extortionate rates” and “[rate] discrimination.” Lord, *supra* note 70, at 754.

<sup>81</sup> An example was refrigerated cars to ship perishable crops, which the railroads needed only seasonally. *Id.* at 763-64.

<sup>82</sup> In his 1905 State of the Union Message, President Roosevelt blasted the abuses of the private car system, calling them “pernicious.” *Theodore Roosevelt’s Fifth Annual Message*, AM. PRESIDENCY PROJECT (Dec. 5, 1905), <http://www.presidency.ucsb.edu/ws/index.php?pid=29546&st=theodore+roosevelt&st1=>.

<sup>83</sup> Elkins Act § 1, 32 Stat. 847, 847-48 (1903).

<sup>84</sup> James W. Ely Jr., *The Troubled Beginning of the Interstate Commerce Act*, 95 MARQ. L. REV. 1131, 1132 (2012).

<sup>85</sup> Thomas W. Merrill, *Article III, Agency Adjudication, and the Origins of the Appellate Review Model of Administrative Law*, 111 COLUM. L. REV. 939, 955-58 (2011) [hereinafter *Article III*] (discussing the debate over the Hepburn Act and President Roosevelt’s involvement); see *Theodore Roosevelt: Domestic Affairs*, MILLER CENTER FOR AM. PRESIDENT, <http://millercenter.org/president/biography/roosevelt-domestic-affairs> (last visited Jan. 21, 2016).

<sup>86</sup> Section 1 of the Hepburn Act provided that, “All charges made for any service rendered or to be rendered in the transportation of passengers or property as aforesaid, or in connection therewith, or for the receiving, delivering, storage, or handling of such property, shall be reasonable and just; and every unjust and

to judge whether rates were just and reasonable (taking it from the courts, which retained power to review the ICC's rate decisions),<sup>87</sup> and power to end discriminatory practices. On this third point, ICA section 15, added by the Hepburn Act, provided:

That the Commission is authorized and empowered, and it shall be its duty, whenever, after full hearing . . . it shall be of the opinion that any . . . regulations or practices whatsoever of such carrier or carriers affecting such rates, are unjust or unreasonable, or unjustly discriminatory, or unduly preferential or prejudicial, or otherwise in violation of any of the provisions of this Act, to determine and prescribe what . . . regulation or practice in respect to such transportation is just, fair, and reasonable to be thereafter followed.<sup>88</sup>

The Congressional debate over the Hepburn Act reflected considerable interest in using this provision to stop specific unlawful practices. For example, Congressman Clayton observed that the new Act “will go far toward preventing secret practices, preferences, rebates, and the like, which have been so difficult to deal with, and which have really resulted in building up immense fortunes in the hands of those favored by such practices, preferences, rebates, and the like.”<sup>89</sup>

The primary mechanism for combating discrimination was the published tariff, which announced a carrier's terms and conditions of service.<sup>90</sup> The tariff was far more than a simple rate schedule. As Thomas Merrill has explained, a tariff is an “administrative contract”<sup>91</sup> — a list of terms and conditions a firm submits and a regulatory agency approves. Announcing core policies and services ensures that all customers receive service under the tariff's terms and conditions, (in theory) protecting them from discrimination.<sup>92</sup> Courts held that

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unreasonable charge for such service is prohibited and declared to be unlawful.” Hepburn Act of 1906 § 1, 34 Stat. 584, 584-86; CLARENCE A. MILLER, *THE LEGISLATIVE EVOLUTION OF THE INTERSTATE COMMERCE ACT* 140 (1930); *see generally* 1 WILLIAM J. KNORST, *INTERSTATE COMMERCE LAW AND PRACTICE* 51-200 (1st ed. 1953).

<sup>87</sup> Hepburn Act § 5, 34 Stat. at 590-92; *see* Merrill, *Article III, supra* note 85, at 965 (noting that the design of that provision presaged modern judicial review of agency decisions).

<sup>88</sup> Hepburn Act § 4, 34 Stat. at 589-90.

<sup>89</sup> 40 CONG. REC. 1996 (1906). Similarly, Congressman Esch decried abuses of the private car system. 40 CONG. REC. 2004 (1906).

<sup>90</sup> N.Y., *New Haven & Hartford R.R. v. ICC*, 200 U.S. 361, 391 (1906).

<sup>91</sup> Merrill, *The Interstate Commerce Act, supra* note 68, at 1142.

<sup>92</sup> *MCI Telecomms. Corp. v. AT&T Corp.*, 512 U.S. 218, 229-30 (1994); *see also id.* at 1145.

providing service without a tariff, failing to file and publish a tariff before providing service, or deviating from an approved tariff, violated the ICA.<sup>93</sup> This made secret preferences and other discrimination more difficult to implement, but did not completely end them.<sup>94</sup> For example, carriers quickly learned to file tariffs that offered different rates to different shippers, based on competitive circumstances.

## 2. Judicial Construction in the Pre-New Deal Era

Almost immediately, courts were called upon to interpret ICA section 15, with several cases reaching the Supreme Court. These cases are hardly fusty relics of history, as they are often cited today. They settled important principles later enshrined in the FPA and that are still vital today: regulators have broad authority to remedy discrimination; discrimination refers to unlawful preferences or advantages; and “practices” must be construed broadly, with some limits, to enable regulators to reach a wide range of activities.<sup>95</sup>

The first major case, *ICC v. Illinois Central Railroad*,<sup>96</sup> settled that the ICC could use its anti-discrimination mandate to remedy railroads’ unlawful preferences, and that this mandate gave the ICC broad power over more behavior than the railroad evils originally identified as problematic. The case involved the ICA’s requirement that a railroad have suitable rail cars to transport goods whenever reasonably demanded by a shipper. A railroad was only bound to provide cars as it might reasonably be expected to have in the ordinary course of its business.<sup>97</sup> If it did not have enough, it would choose how to allocate them. Could the ICC issue an order forcing a different distribution?

The ICC issued just such an order,<sup>98</sup> and the Supreme Court upheld it, rejecting the railroad’s argument that the ICC had no power to

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<sup>93</sup> Merrill, *The Interstate Commerce Act*, *supra* note 68, at 1145.

<sup>94</sup> Paul Stephen Dempsey, *The Rise and Fall of the Interstate Commerce Commission: The Tortuous Path from Regulation to Deregulation of America’s Infrastructure*, 95 MARQ. L. REV. 1151, 1164 (2012) (noting that unlawful practices persisted after the Elkins and Hepburn Acts).

<sup>95</sup> Cases decided under the ICA have relevance in FPA cases, due to the settled principle of statutory construction that “where provisions of one statute have been adopted by another, the interpretation which has been authoritatively placed upon the former applies to the latter also.” *Hope Natural Gas Co. v. FPC*, 196 F.2d 803, 807 (4th Cir. 1952); *cf. Ivy Broad. Co. v. Am. Tel. & Tel. Co.*, 391 F.2d 486, 490-91 (2d Cir. 1968) (observing that ICA cases retain their importance under the Communications Act).

<sup>96</sup> *ICC v. Ill. Cent. R.R.*, 215 U.S. 452 (1910).

<sup>97</sup> MOORE, *supra* note 70, at 67-68.

<sup>98</sup> *Ill. Cent. R.R.*, 215 U.S. at 464-65.

compel a particular distribution. To hold otherwise, the Court stated, “would require us to hold that Congress, in enlarging the power of the [c]ommission over rates, had so drafted the amendment as to cripple and paralyze its power in correcting abuses as to preferences and discriminations which, as this court has hitherto pointed out, it was the great and fundamental purpose of Congress to further.”<sup>99</sup> “Abuses” of any sort were within the ICC’s purview to address.

The second major case, 1916’s *United States v. Pennsylvania Railroad*, the so-called “Tank Car Case,”<sup>100</sup> involved the railroad’s responsibility (if any) to procure private cars for its shippers. Two oil companies sought to have the ICC force the Pennsylvania Railroad to provide them tank cars for shipping oil.<sup>101</sup> Tank cars were a significant improvement over barrel shipping, allowing for larger oil shipments at lower per-unit rates.<sup>102</sup> At the time, however, the vast majority of oil tank cars were in private hands,<sup>103</sup> and the Pennsylvania Railroad owned less than 3% of the national total.<sup>104</sup>

The ICC ordered the railroad to furnish cars to the two companies. A lower court reversed the order, and the Supreme Court affirmed. Justice McKenna discussed at length the claim that the refusal to provide private cars was a “practice.” The Court observed that the Hepburn Act had not defined the “practices ‘affecting [such] rates’” language.<sup>105</sup> It was up to the Court to bring clarity, but the language that came next was anything but clear:

Let us test the contention and see where it takes us. The request was for a special facility, a combination of package and car, and the question, then, is whether the neglect to provide it or to furnish it was a ‘practice’ within the meaning of § 15. The far-reaching effect of an affirmative answer is instantly apparent, and there must be hesitation to declare it from the

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<sup>99</sup> *Id.* at 477.

<sup>100</sup> *United States v. Pa. R.R. Co.*, 242 U.S. 208 (1916).

<sup>101</sup> *See id.* at 219-20.

<sup>102</sup> *See id.* at 211.

<sup>103</sup> A Congressional report several years after the Tank Car Case, discussing subsequent legislative developments, called the inadequacy of private cars “notorious,” and stated that, “[f]or years the increase in the equipment of the carriers had lagged behind the increase in the total demand for equipment.” *Railroad Revenues and Expenses: Hearings Before the Comm. on Interstate Commerce*, 67th Cong. 2601 (1922).

<sup>104</sup> *Pa. R.R. Co.*, 242 U.S. at 231 (restating the ICC’s conclusions of facts that the Pennsylvania Railroad owned less than 1,000 cars, and all other railroads east of the Mississippi owned 303, while the total nationwide was over 40,000).

<sup>105</sup> *Id.* at 228.

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use of so inapt a word as 'practice.' Following a well-known rule of construction, we must rather suppose its association was intended to confine it to acts or conduct having the same purpose as its associates. And there were many such acts for which the word could provide, — practices which confused the relation of shippers and carriers, burdened transportation, favored the large shipper, and oppressed the small one. These have illustrations in decisions of the Commission. And this was purpose enough, remedied all that was deemed evil in privately owned cars of any type. Beyond that it was not necessary to go; beyond that there were serious impediments to going; and we cannot but believe that if beyond that it was intended to go, there would have been explicit declaration of the intent, with such provision as to notice and time and preparation as its consequences would demand; not ambushed in obscurity and suddenly disclosed by construction to turn accepted custom into delinquency, — a construction that could be disputed and was disputed.<sup>106</sup>

In other words, the Supreme Court would not use the anti-discrimination mandate to compel railroads to purchase private cars. This would have created a virtually unlimited responsibility, expanding railroads' obligations well beyond the needs of two oil companies shipping in western Pennsylvania.<sup>107</sup> Moreover, to require shippers to provide for their own private cars was not discrimination, as that was understood at the time. The railroad was not choosing among shippers, for example, by buying cars for some and not for others.

Nearly 100 years later, some courts saw only limitations in this language to a broad construction of "practices" ("[b]eyond that it was not necessary to go," "serious impediments," a construction "ambushed in obscurity and suddenly disclosed").<sup>108</sup> Viewing the holding in context, however, it is neither surprising nor much of a limit on "practices." Indeed, what the Court did *not* do is more important today than its precise holding about tank cars. Justice McKenna did not alter or constrain the ICC's general statutory authority to remedy a broad range of practices. He confirmed it: the

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<sup>106</sup> *Id.* at 229.

<sup>107</sup> The Court stated, "[i]f there be a duty [to provide private cars], it would seem necessarily to be universal. And such contention is growing." *Id.* at 229.

<sup>108</sup> See *infra* notes 219–33 and accompanying text (discussion of Tank Car Case as limiting FERC's authority, in the *California Independent System Operator* case).

ICC could remedy “many such acts” of discrimination.<sup>109</sup> Practices were activities favoring one group of shippers over another unjustly; in the archaic usage “confused the relation,” “relation” meant “relationship.”<sup>110</sup> The ICA did not define “practices” and “affecting,” and the fact that “many such acts” could be discriminatory demonstrated the terms’ breadth and flexibility.

The core function of section 15 regulation was to control discriminatory practices favoring one group of shippers over another. That principle, not the specific holding about the private car system, is the Tank Car Case’s most important contribution to modern law. Consider how the case was remembered in *Northern Pacific Railway Co. v. United States*, a lower court decision two decades later that summarized the meaning of “practices affecting rates” in the 1940s (that is, just after the FPA’s enactment) as follows: “‘practice’ as employed in the statute cannot have a meaning co-extensive with any exigency deemed to exist, or elastic enough to embrace everything a carrier may do [but] it does embrace those things that affect arbitrarily and unreasonably the purse of the shipper.”<sup>111</sup>

Consistent with this interpretation, discriminatory practices in this era were individual railroads’ actions giving undue preferences to specific shippers. “Practices” included specific evils (rebates, pools, and drawbacks) and other preferences. To ascertain whether practices were unlawful, the agency would measure conduct against terms and conditions listed in a tariff. Discrimination conducted in “secret,” of course, was illegal. Otherwise, discrimination was viewed contextually.<sup>112</sup> The mere existence of differential treatment was not sufficient *per se* to establish discrimination. Each practice would be examined in terms of whether the railroad was recovering its costs, and whether those costs were imposed arbitrarily and unreasonably on specific customers.<sup>113</sup> Facts could be presented to justify specific differentials that on their face appeared improper. Also, if a railroad did not favor one class of shippers over another (as in the Tank Car Case, with no allegations that the railroad was buying cars for some

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<sup>109</sup> *Pa. R.R. Co.*, 242 U.S. at 229.

<sup>110</sup> For an earlier example of this usage, see 3 *THE SCOTTISH MAGAZINE, AND CHURCHMAN’S REVIEW* 591 (Edinburgh: R. Lendrum & Co., 1854), noting that Martin Luther “confused the relation of the two parts of the sacrament.”

<sup>111</sup> *N. Pac. Ry. Co. v. United States*, 41 F. Supp. 439, 443 (D. Minn. 1941), *affd.*, 316 U.S. 346 (1942).

<sup>112</sup> Speta, *supra* note 74, at 1200.

<sup>113</sup> *See id.* at 1198-200.

shippers and not for others), its activities would not be termed discriminatory.

However, courts imposed limits on the application of the anti-discrimination mandate. A relationship to jurisdictional rates was important. Thus, in the 1931 case of *Missouri Pacific Railroad Co. v. Norwood*,<sup>114</sup> the Supreme Court held that the ICA's "practices affecting rates" language did not give the ICC the authority to regulate the number of men to be employed in crews, declining to consider a carrier's employment decisions "practices." A practice must be "connect[ed] with the fixing of rates to be charged and prescribing of service to be rendered[.]"<sup>115</sup>

B. "Discrimination" and "Practices Affecting Rates" from the FPA's  
*Enactment Through the Rise of Competition and Modern Markets*

The law developed under the ICA created the foundation for the FPA. Congress modeled the FPA on the ICA,<sup>116</sup> carrying its language forward almost verbatim<sup>117</sup> to form the core of FERC's authority to regulate wholesale transactions. The FPA copied the ICA's rate-setting provisions,<sup>118</sup> just and reasonable standard for wholesale rates,<sup>119</sup> and prohibitions on discrimination or granting any "undue prejudice or disadvantage."

Two of the FPA's core sections mention "practice" or "practices." The first is section 205, where the FPA continued the tariff requirement. For the first several decades of regulation under the FPA, the primary instrument of regulation, as under the ICA, was a firm-specific tariff filing.<sup>120</sup> FPA section 205(a) requires public utilities (as defined in the statute) to file tariffs setting forth schedules of rates and charges. Section 205(a) requires a jurisdictional utility to submit its

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<sup>114</sup> *Mo. Pac. R.R. v. Norwood*, 283 U.S. 249 (1931), *modified*, 283 U.S. 809 (1931).

<sup>115</sup> *Id.* at 257.

<sup>116</sup> See *Nw. Pub. Serv. Co. v. Mont. Dakota Util. Co.*, 181 F.2d 19, 22 (8th Cir. 1950), *aff'd*, 341 U.S. 246 (1951).

<sup>117</sup> Congress incorporated nearly identical language in other New Deal-era statutes. Merrill, *The Interstate Commerce Act*, *supra* note 68, at 1145-46. These statutes included the Communications Act of 1934, the Motor Carrier Act (which regulated trucking), and the Natural Gas Act (which regulated the interstate natural gas industry). The ICA, as amended by the 1920 Transportation Act, continued to regulate railroads.

<sup>118</sup> See David B. Spence & Robert Prentice, *The Transformation of American Energy Markets and the Problem of Market Power*, 53 B.C. L. REV. 131, 142 (2012).

<sup>119</sup> 16 U.S.C. § 824d(a) (2012).

<sup>120</sup> *Cf. MCI Telecomms. Corp. v. AT&T Corp.*, 512 U.S. 218, 220 (1994) (filing of tariffs was "the centerpiece" of the Communications Act's regulatory scheme).

rates to FERC, and section 205(c) imposes other, more extensive filing requirements for “classifications, practices, and regulations affecting such rates and charges, together with all contracts which in any manner affect or relate to such rates, charges, classifications, and services.”<sup>121</sup>

The second mention is in FPA section 206(a), which mirrored ICA section 15. As noted above, it provides a mandate for FERC to remedy a practice it finds “unjust” or “unreasonable”: if “any rule, regulation, practice, or contract affecting such rate, charge, or classification is unjust, unreasonable, unduly discriminatory or preferential,” FERC must “determine the just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force, and shall fix the same by order.”<sup>122</sup>

This section analyzes the application of these provisions up to the beginning of the modern, market-based era. It begins with a discussion of the construction of “undue discrimination” in the first several decades after the FPA’s enactment, noting its similarity to agency interpretation under the ICA. It then turns to evaluate a divergence in the interpretation of “practices affecting rates”: the evolving use of “practices” to refer to the terms and conditions of a utility’s tariff, rather than specific discriminatory practices, and the use of the FPA’s filing requirement to fix the extent of FERC’s authority.

#### 1. Agency and Judicial Construction of “Undue Discrimination” After the FPA’s Enactment

For decades after the FPA’s enactment, the FPC interpreted section 206 much as the ICC had remedied railroad discrimination. This need not have been the case. The electric industry’s economics, and the circumstances under which federal regulation began, were different from those of the railroads. As Professor Merrill explains, the administrative contract “got its start in an industry characterized by a mixture of competitive and monopolistic routes, where differential pricing (i.e., ‘discrimination’) was rampant, [but] it proved to be equally popular in industries with natural monopoly characteristics . . . .”<sup>123</sup> As noted above, the FPA aimed to close the *Attleboro* gap and provide for national regulation of the utility industry, not to remedy specific discriminatory practices. There was no indication that the anti-discrimination mandate should change to

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<sup>121</sup> 16 U.S.C. § 824d(c).

<sup>122</sup> *Id.*

<sup>123</sup> Merrill, *The Interstate Commerce Act*, *supra* note 68, at 1146.

suit the differences between industries, and the statutory structure was simply carried over intact. Giving FPC broad anti-discrimination powers suggests these provisions had worked well up to this point, and the inclusion of nearly identical language in other New Deal-era regulatory statutes further supports this view.<sup>124</sup>

Judicial standards for defining and addressing discrimination carried over to the utility setting, and ICA precedents were routinely cited in utility cases.<sup>125</sup> “Undue discrimination,” in an industry of vertically integrated utilities facing no competition, meant unlawful differences in rates, terms, and conditions by individual utilities among their customers. This test looked to the tariff to ensure that the utility provided like rates, terms, and conditions of service to similarly situated customers.<sup>126</sup> Utilities could not favor a class of customers, unless specific factual differences justified different rates or terms and conditions of electricity service.<sup>127</sup> As in the case of the railroads, the FPC conducted fact-specific inquiries in individual cases.

As under the ICA, “undue” or “unreasonable” discrimination was prohibited, but not all rate differences. If “the record exhibit[ed] factual differences to justify . . . differences among the rates

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<sup>124</sup> Examples of this are found in communications and airlines regulation. The Communications Act of 1934 removed regulation of telephone, telegraph, and radio industries from the ICC (which received some authority under the Mann-Elkins Act), and gave it to the new Federal Communications Commission. *See* *Essential Commc'ns Sys. Inc. v. Am. Tel. & Tel. Co.*, 610 F.2d 1114, 1117-19 (3d Cir. 1979) (detailing early regulation of telecommunication and railroad industries); STUART N. BROTMAN, COMMUNICATIONS LAW AND PRACTICE § 4.01[2] (1995 ed.) (describing powers given to the ICC to regulate telephone and telegraph services under the Mann-Elkins Act).

Section 201(b) of the Communications Act incorporated the “practices affecting rates” language, empowering the FCC to prohibit an “unjust” or “unreasonable” practice. *See* 47 U.S.C. § 201(b) (2012); *Global Crossing Telecomms., Inc. v. Metrophones Telecomms., Inc.*, 550 U.S. 45, 58 (2007).

The Civil Aviation Act of 1938 and subsequent Federal Aviation Act of 1958 (Pub. L. No. 85-726, 72 Stat. 731 (1958)) regulated the airlines through regulatory tariffs; section 1002(d) of the latter statute (now repealed) incorporated the “practices affecting rates” language.

<sup>125</sup> *See, e.g., St. Michaels Utils. Comm'n v. Fed. Power Comm'n*, 377 F.2d 912, 915 (4th Cir. 1967) (citing five cases decided under the ICA).

<sup>126</sup> *See* *Pub. Serv. Co. of Ind. v. FERC*, 575 F.2d 1204, 1211-12 (7th Cir. 1978).

<sup>127</sup> *New Eng. Power Pool*, 67 FERC ¶ 61,042, 61,132 (1994); *St. Michaels Utils. Comm'n*, 377 F.2d at 915; *cf. Eisman v. Pan Am. World Airlines*, 336 F. Supp. 543, 546 (E.D. Pa. 1971) (concluding, in a case involving the propriety of student and youth air fares, that the Civil Aeronautics Board could make fact-specific inquiries as to whether differences in fares for the different classes of travelers were warranted under that standard).

charged,”<sup>128</sup> courts would not upset FERC’s findings that utilities’ rate differences were justified. A typical case holding that no discrimination existed under FPA section 206 despite differences in rates was *St. Michaels Utilities Commission v. FPC*,<sup>129</sup> a 1967 Fourth Circuit case upholding a utility’s difference in charges to two different classes of customers. This construction of “discrimination” looked no different from that of the early railroad cases.

## 2. Post-FPA Changes in “Practices Affecting Rates”

While the original understanding of discriminatory conduct carried over to the FPA setting, the interpretation of “practices” evolved from its original meaning of addressing discriminatory activities. In judicial decisions and agency interpretations, the focal point for defining practices shifted to interpreting section 205(c)’s filing requirement. As Justice Breyer observed in the 2007 *Global Crossing Telecommunications v. Metrophones Telecommunications* decision about the Communications Act’s nearly identical provision, “the word ‘practice’ in [Communications Act] § 201(b) traditionally applied to a carrier practice that (unlike the present one) is the subject of a carrier tariff — i.e., a carrier agency filing that sets forth the carrier’s rates, classifications, and practices.”<sup>130</sup> The FPC — and other agencies using provisions derived from the ICA — reasoned that filing standard practices or procedures in a tariff furthered the anti-discrimination purpose.

The few reported decisions in the post-New Deal decades that interpreted the “practices affecting rates” language reflected a contract interpretation theme, as courts grappled with how much detail tariffs should contain. “Practices” were the core of the utility-customer relationship. So did everything have to be spelled out in detail, or could some utility conduct be inferred? Specifying terms and conditions with less precision might threaten the level playing field on which consumers received service. However, if utilities had to spell out their activities in too much detail, it might burden them

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<sup>128</sup> *Pub. Serv. Co. of Ind.*, 575 F.2d at 1211.

<sup>129</sup> *Alabama Elec. Coop. v. FERC*, 684 F.2d 20, 21 (D.C. Cir. 1982) (requiring FERC to grant cooperative customers an opportunity to prove dissimilarity where the same rates charged by utility to cooperative and municipal customers produced different rates of return); *St. Michaels Utils. Comm’n*, 377 F.2d at 912; *Portland Gen. Exch., Inc.*, 51 FERC ¶ 61,108, 61,245 n.62 (1990).

<sup>130</sup> *Global Crossing Telecomms., Inc. v. Metrophones Telecomms., Inc.*, 550 U.S. 45, 57 (2007).

excessively: did a regulator really need to know how many office staff a utility employed?

FPC's approach was a case-by-case inquiry it called the "rule of reason."<sup>131</sup> It did not insist that tariffs describe all "routine" utility practices, but balanced the benefits to consumers against the burdens on utilities of filing procedures, policies, or practices. An often-quoted agency decision was the 1965 *Michigan Wisconsin Pipe Line Company* case.<sup>132</sup> The case involved a gas pipeline company's service to customers via branch or lateral lines (lines that break off of main pipelines to transport gas to end users), and whether terms and conditions of the company's service for these lines should be included in its tariff. The FPC held this was required, stating that a natural gas utility was required to file documents establishing a "consistent and predictable course of conduct of the supplier that affects its financial relationship with the consumer."<sup>133</sup>

Typical of this era is *Village of Winnetka v. FERC*,<sup>134</sup> a 1982 case in which a Chicago suburb purchased electricity from its utility when it could not produce enough in its municipal power plant. The utility's tariff did not spell out the conditions or timing of these sales in detail. When the utility changed those terms, the village filed a complaint with FERC. It argued the utility should amend its tariff to include the approach to energy sales it had maintained for seven years as a "practice," and could not depart from this approach without prior FERC approval. FERC rejected the complaint with a summary discussion. The D.C. Circuit cited the rule of reason and the *Michigan Wisconsin* standard defining "practice" as controlling, and vacated FERC's order, holding FERC had not adequately explained its reasoning as to why the particular course of conduct was not a "practice" under this standard.

As explained by then-Judge Scalia in the D.C. Circuit's 1985 *City of Cleveland* decision, a utility's tariff filing need only include practices that affect rates "significantly." FERC had issued an order requiring a utility to file rate schedules with details about its provision of electric service to Cleveland. The city wanted the utility to set forth its

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<sup>131</sup> *Town of Easton v. Delmarva Power & Light Co.*, 24 FERC ¶ 61,251, 61,531 (1983).

The similarity to the "rule of reason" test in antitrust law occasionally caused judicial confusion. See *Transwestern Pipeline Co. v. FERC*, 820 F.2d 733, 741 (5th Cir. 1987) (rejecting the application of antitrust standards in reviewing FERC's actions).

<sup>132</sup> *Mich. Wis. Pipe Line Co.*, 34 F.P.C. 621 (1965).

<sup>133</sup> *Id.* at 626.

<sup>134</sup> *Vill. of Winnetka v. FERC*, 678 F.2d 354 (D.C. Cir. 1982).

practices in even more detail. The D.C. Circuit upheld FERC's order accepting the utility's compliance filing, stating in part,

[T]here is an infinitude of practices affecting rates and service. The statutory directive must reasonably be read to require the [tariff disclosure] of only those practices that affect rates and services *significantly*, . . . It is obviously left to the Commission, within broad bounds of discretion, to give concrete application to this amorphous directive.<sup>135</sup>

Like the language of *Michigan Wisconsin*, this struck a balance in filing between detail and transparency, focusing on the connection between the utility's activity and rates. "Routine" activities did not have to be filed; "significant" ones did.<sup>136</sup> What about activities by actors other than utilities that were significantly connected to rates, such as construction of new power plants? Neither *City of Cleveland* nor *Michigan Wisconsin* involved facts of this sort, so the question of whether these practices had to be filed went unaddressed. For years, then, there was a pragmatic connection between the filing requirement and the extent of FERC jurisdiction. It was simply assumed that the standard for filing was the last word on agency authority.<sup>137</sup>

For years, no court analyzed the matter further. Unlike "just and reasonable" and "undue discrimination," which were the subject of many judicial decisions, "the filing requirements of § 205 of the FPA did not receive such close scrutiny."<sup>138</sup> One reason was the existence of a "gentleman's agreement" between FERC and the utilities:

[F]or certain categories of cases, the industry and the Commission staff over the years must have operated under a tacit understanding. Instead of arguing over which classes of agreements came within section 205, the industry filed those contracts covering transactions it thought (or the staff indicated) the agency would scrutinize. Companies held back

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<sup>135</sup> *City of Cleveland v. FERC*, 773 F.2d 1368, 1376 (D.C. Cir. 1985) (emphasis in original); cf. *Pub. Serv. Comm'n of N.Y. v. FERC*, 813 F.2d 448, 454 (D.C. Cir. 1987) (interpreting the nearly identical NGA ratemaking section and holding that FERC properly excused utilities from filing policies or practices that dealt only with matters of "practical insignificance" to providing service to customers).

<sup>136</sup> See Rokach, *supra* note 66, at 86.

<sup>137</sup> Cf. Richard McKenna, *Preemption Under the Communications Act*, 37 FED. COMM. L.J. 1, 18-19 (1985) (noting that the FCC's jurisdiction in the communications field in the years after the Communications Act's enactment was largely decided by tariff filings).

<sup>138</sup> Rokach, *supra* note 66, at 84.

those in which the Commission would show no interest, even if the agreements were jurisdictional.<sup>139</sup>

For several decades, neither FERC nor the courts tested the limits of FERC's jurisdiction. The filing requirement was interpreted informally under this "tacit understanding," which helps explain the paucity of reported decisions. Important issues were unexplored in the FPA, the legislative history, or the cases.<sup>140</sup>

### III. THE TRANSITION TO COMPETITION AND MODERN APPLICATIONS OF "UNDUE DISCRIMINATION" AND "PRACTICES AFFECTING RATES"

This situation changed dramatically with the advent of electric industry competition, when the meanings of "practices and "discrimination" both changed substantially, but in similar ways. The transformation of "undue discrimination" to a modern platform for addressing industry-wide conditions is well known and the subject of much commentary.<sup>141</sup> Now, *FERC v. EPSA* confirms that the meaning of "practices affecting rates" changed as well.

Beginning with the first shift, FERC's interpretation of "undue discrimination" extended beyond an individual utility's conduct. In agency decisions and rules, FERC has taken an industry-wide view of its anti-discrimination mandate, using it to promote competition by establishing open access to the transmission grid, and prompting the creation of ISO/RTOs and the wholesale markets. As a result, a second transformation has taken place. FERC's oversight role has changed to overseeing market conditions to prevent discriminatory practices toward consumers. Instead of judging whether an individual firm's action is unjust, unreasonable, or discriminatory, it decides whether features of the wholesale markets' operation contribute to this effect. The Supreme Court has strongly endorsed these two interpretive shifts.<sup>142</sup>

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<sup>139</sup> *Id.*; cf. Boyd, *supra* note 1, at 1630 (observing that during this period, "[f]or the next several decades, the electric utility industry operated in a fairly stable economic and regulatory environment, . . . [under a] 'public utility consensus' forged among managers, regulators, and technical experts").

<sup>140</sup> Rokach, *supra* note 66, at 99-100 (stating that "the legislative history of section 205(a) omitted any mention of this issue").

<sup>141</sup> Eisen, *An Open Access Distribution Tariff*, *supra* note 1, at 1750-51; see also Richard J. Pierce, Jr., *Realizing the Promise of Restructuring the Electricity Market*, 40 WAKE FOREST L. REV. 451, 466-68 (2005); Joseph P. Tomain, *The Past and Future of Electricity Regulation*, 32 ENVTL. L. 435, 456-57 (2002) (discussing the justification of Order 2000 under the anti-discrimination mandate).

<sup>142</sup> See, e.g., *New York v. FERC*, 535 U.S. 1, 1 (2002) (upholding Order 888 and

“Practices affecting rates” authority has changed in similar fashion. First, the understanding of “practices” has transitioned from firm-specific tariffs to aspects of market operation. Second, the cases have given FERC broad authority to regulate activities relating to terms and conditions of market operation, even in some cases if they conflict with state law. Finally, *FERC v. EPSA* and the cases preceding it have set limits similar to those of the past, requiring a direct and significant relationship to wholesale rates.

Why did it take until 2016 for definitive confirmation of these shifts? There are several answers. In the market setting, the meaning of “practices” is not self-evident, in terms of who is covered or what conduct is. Before the market era, “practices” were those of individual utilities. In markets, whose actions can FERC regulate as “practices”? And what is the scope of “practices”: could FERC regulate *any* activities that affect markets? In *New York v. FERC*, there was no need to decide whether “practices” had limits. Utilities’ actions hampering transmission access came within FERC’s unquestioned authority over transmission.<sup>143</sup> Not so with an activity such as demand response, where the scope of FERC’s authority is not spelled out in the FPA’s text.

Another challenge stemmed from the fact that unlike other industries that deregulated, FERC kept tariffs, albeit in a different form. The transition to competition began later in the utility industry than in other deregulating industries.<sup>144</sup> Yet almost alone among these industries, the utility industry kept the regulatory device for addressing discrimination — the tariff.<sup>145</sup> FERC has encouraged

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related agency actions, based in part on the agency’s concern about discriminatory practices under sections 205 and 206).

<sup>143</sup> See *id.*

<sup>144</sup> See Eisen, *Regulatory Linearity*, *supra* note 26, at 549 (noting that the electric utility industry deregulated after the airline and telecommunications industries); Claire A. Watkins, *Nuclear Power Rate Regulation After Eastern Enterprises: Are Ratepayers Being Taken for a Ride?*, 28 B.C. ENVTL. AFF. L. REV. 191, 208 (2000) (same conclusion).

<sup>145</sup> See generally Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 COLUM. L. REV. 1323 (1998) (describing the different policy path taken by restructuring of the electric power industry from the transition to competition in other regulated industries).

Domestic air fares were deregulated by the Airline Deregulation Act of 1978, Pub. L. No. 95-504 (1978), which removed the tariff requirement. The Motor Carrier Act of 1980, Pub. L. No. 96-296, 94 Stat. 793, completed final deregulation of the motor carrier industry and removed the requirement that carriers file their domestic passenger fares and rules with the Department of Transportation.

Most of the telecommunications field is regulated today without tariffs, but some aspects are still tariffed. The Telecommunications Act of 1996, Pub. L. No. 104-104,

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competitive markets and regulated the industry through broad *pro forma* tariffs that describe the markets' structure and operating rules for competitors and consumers, not by firm-specific tariffs. This made for difficulties in interpreting earlier cases. What relevance was there for judicial decisions about firm-specific tariffs when the nature of tariffs had changed? Moreover, what about the ICA cases that made distinctions about practices that could be termed discriminatory: what significance, if any, did they have in the wholly different context of the modern wholesale markets?

This Part discusses a standard for FERC's jurisdiction in wholesale markets that addresses these questions and is consistent with both *FERC v. EPSA* and the underlying movement in the law: FERC may regulate those practices which impact the wholesale markets directly or are integral to the proper functioning of the wholesale markets, but not practices that are only remote or insignificant in their connection to these markets. As discussed in this Part, this expanded understanding of *FERC v. EPSA*'s "directly affecting" principle squares with the historical interpretations of "practices" and cases decided by the Supreme Court and D.C. Circuit during the modern, market-based era. Moreover, it is also similar to the evolution of the interpretation of "undue discrimination," giving FERC its proper role in addressing the challenges posed in modern markets.

A. *Evolution of "Undue Discrimination" to an Industry-Wide Focus*

By the 1980s, a modern approach to "discrimination" was needed. As FERC stated, "changing conditions in the electric utility industry, including the emergence of non-traditional suppliers and greater competition in bulk power markets,"<sup>146</sup> required it. FERC's fact-specific test for undue discrimination allowed utility customers to challenge unfavorable rates by arguing that the utility offered improperly lower rates to its other customers. Protecting customers who purchased electricity at market-based rates required a different analysis.

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110 Stat. 56, "detariffed" (opened to competition) many services in the telephone industry. Following detariffing, most services are handled competitively but some matters are still regulated by tariffs. See *Mandatory Detariffing of Interstate and International Interexchange Services*, FED. COMM. COMMISSION (Aug. 8, 2008), <https://transition.fcc.gov/wcb/ppd/detariffing1.html>; *Tariffs*, FED. COMM. COMMISSION, <https://www.fcc.gov/encyclopedia/tariffs> (last visited Jan. 24, 2015).

<sup>146</sup> Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 18 C.F.R. pts. 35, 385 (1996).

FERC's statutory mandate remained the same,<sup>147</sup> but the issues it faced in section 206 discrimination claims were different. Utilities owning transmission lines were perceived to offer terms and conditions for transmission service on their own systems more favorable than those offered to the upstart generators seeking to compete with them. This led to a raft of claims of undue discrimination by these generators to FERC that were grounded in unfair treatment when compared to the electric utility's use of its own transmission system, not in rate differentials for customers of the same utility.

FERC's groundbreaking response was the 1994 *American Electric Power* decision.<sup>148</sup> This decision added a "comparability" requirement to the undue discrimination test, requiring a utility tariff to "offer third parties access on the same or comparable basis, and under the same or comparable terms and conditions, as the transmission provider's uses of its system."<sup>149</sup> The "comparability" standard departed from the focus on an individual utility's customers,<sup>150</sup> ensuring that utilities could not favor their own generation over that of independent generators when providing transmission service. It has no direct support in the FPA; "comparability" is found nowhere in the statute.<sup>151</sup> Instead, FERC interpreted the section 205 ban on "undue prejudice or disadvantage" and "just and reasonable" requirement to mandate it.<sup>152</sup>

Later, FERC adopted the comparability standard on an industry-wide basis in Order 888, requiring open access to the transmission grid. Order 888 contained the *pro forma* Open Access Transmission Tariff ("OATT"), which enshrined the principle of comparability. It required that public utilities subject to FERC's jurisdiction owning or controlling transmission lines provide open, non-discriminatory access on them to transmission customers. The OATT contains no

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<sup>147</sup> Cf. *Global Crossing Telecomms., Inc. v. Metrophones Telecomms., Inc.*, 550 U.S. 45, 50 (2007) (noting that with competition neither Congress nor the FCC "abandoned traditional regulatory requirements").

<sup>148</sup> *Am. Elec. Power Serv. Corp.*, 67 FERC ¶ 61,168 (1994).

<sup>149</sup> *Id.* ¶ 61,490.

<sup>150</sup> 18 C.F.R. pts. 35, 385 (stating that, "the Commission broadened its undue discrimination analysis (which traditionally had focused on the rates, terms, and conditions faced by similarly situated third-party customers) to include a focus on the rates, terms, and conditions of a utility's own uses of the transmission system").

<sup>151</sup> SCOTT HEMPLING, *FERC'S DEMAND RESPONSE DECISIONS: WHAT ARE THE OPPORTUNITIES AND LIMITS?* 4 (2013), available at [http://sustainableferc.org/wp-content/uploads/2013/09/Library/5-Scott-Hempling-Papers/FERC's%20Demand%20Response%20Decisions%20\(July%202013\).pdf](http://sustainableferc.org/wp-content/uploads/2013/09/Library/5-Scott-Hempling-Papers/FERC's%20Demand%20Response%20Decisions%20(July%202013).pdf).

<sup>152</sup> *Ala. Mun. Elec. Auth. v. FERC*, 662 F.3d 571, 573 (D.C. Cir. 2011).

firm-specific rates or service terms and conditions. Instead, it is a tariff made generally applicable to the entire class of transmission grid owners and operators. Each public utility was required to file the *pro forma* OATT, with only limited exceptions.<sup>153</sup> Today, ISOs and RTOs — regulated public utilities as defined under the FPA — operate wholesale markets under this system. FERC revises the *pro forma* OATT with rules — such as Order 745 and 2007’s Order 890 that reformed the OATT — that change market operations by requiring tariff changes.<sup>154</sup>

FERC justified Order 888 under sections 205 and 206, and a D.C. Circuit decision in *Associated Gas Distributors v. FERC* that further emboldened it to interpret the anti-discrimination provision broadly.<sup>155</sup> Applying comparability by requiring non-discriminatory open access to transmission services, FERC explained, “is critical to the full development of competitive wholesale generation markets and the lower consumer prices achievable through such competition.”<sup>156</sup> Order 888 changed the interpretation of “undue discrimination” in a fundamental way: it was not based on a showing of facts that demonstrated that an individual utility unduly discriminated in favor of specific customers against others, or had engaged in specific discriminatory behavior such as hampering access to transmission lines. This broad interpretation drew criticism,<sup>157</sup> but is settled now. In *New York v. FERC*, the Supreme Court upheld Order 888, and its use

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<sup>153</sup> The *pro forma* OATT contains the minimum terms and conditions for non-discriminatory transmission service, and every transmission-owning public utility must abide by the tariff in providing transmission services to itself and others. 18 C.F.R. § 35.28 (2015) (describing requirements); see also Transmission Access Policy Study Grp. v. FERC, 225 F.3d 667, 727 (D.C. Cir. 2000).

Once their OATTs were effective, public utilities were allowed to file deviations from the OATT consistent with or superior to the *pro forma* OATT’s terms and conditions. 18 C.F.R. pts. 35, 385.

<sup>154</sup> Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, 72 Fed. Reg. 12,266, 12,294–12,489 (Mar. 15, 2007). Order 890 contained a number of reforms to the OATT, including new mechanisms for the determination of “available transfer capability” (in lay terms, the amount of space available) on transmission lines.

<sup>155</sup> See *Associated Gas Distribs. v. FERC*, 824 F.2d 981 (D.C. Cir. 1987), cert. denied, 485 U.S. 1006 (1988).

<sup>156</sup> 18 C.F.R. pts. 35, 385.

<sup>157</sup> William L. Massey, Robert S. Fleishman & Mary J. Doyle, *Reliability-Based Competition in Wholesale Electricity: Legal and Policy Perspectives*, 25 ENERGY L.J. 319, 327 (2004) (noting that Order 888 provoked “much skepticism outside the agency”).

of the undue discrimination provisions to reach conduct preventing open access to the transmission lines.<sup>158</sup>

Courts have also confirmed that FERC's authority now extends to remedying discrimination in wholesale market operations. To cite one example, FERC polices market power abuses to protect consumers.<sup>159</sup> In FERC's major contemporary rulemakings, the focus is on whether the market system has systemic shortcomings, creating discrimination. This interpretive evolution is not surprising. FERC's authority to oversee markets for discrimination is directly comparable to the original goal of regulation: remedying anti-competitive behavior. It continues the agency focus, dating to the ICA, on protecting consumers by fostering awareness of matters that can directly influence rates, and curbing or checking those actions that cause undue discrimination among classes of market participants and as a result cause rates to be unjust or unreasonable. The light shines "on particular transactions and activities, not on particular persons,"<sup>160</sup> and the core concern is still "the role being played by any given person or entity and the transaction being regulated."<sup>161</sup>

But questions about interpreting "practices" remained. When FERC finds "practices affecting rates" are discriminatory, it can order a remedy such as Order 745. That begs the central question: what practices may FERC regulate?

### B. *Evolution of "Practices Affecting Rates" in the Modern Era*

As the Supreme Court has now stated, the meaning of "practices affecting rates" has evolved as well to center regulatory attention on

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<sup>158</sup> *New York v. FERC*, 535 U.S. 1, 2 (2002).

<sup>159</sup> See *Morgan Stanley Capital Grp., Inc. v. Pub. Util. Dist. No. 1 of Snohomish County*, 554 U.S. 527, 535 (2008); Richard B. Miller, Neil H. Butterklee & Margaret Comes, "Buyer Side" Mitigation in Organized Capacity Markets: Time for a Change?, 33 ENERGY L.J. 449, 455 (2012). Specific analyses of FERC's role in dealing with market power abuses in the California wholesale electricity markets include Spence & Prentice, *supra* note 118, at 159, and Jacqueline Lang Weaver, *Can Energy Markets be Trusted?: The Effect of the Rise and Fall of Enron on Energy Markets*, 4 HOUS. BUS. & TAX L.J. 1, 52 (2004). Cf. Speta, *supra* note 74, at 1195-96 (discussing the potential for application of nondiscrimination principles to the regulation of broadband); Barbara van Schewick, *Network Neutrality and Quality of Service: What a Nondiscrimination Rule Should Look Like*, 67 STAN. L. REV. 1, 1-2 (2015) (discussing the potential for application of nondiscrimination principles to regulation of the Internet).

<sup>160</sup> Brief of the Microgrid Resources Coalition as Amicus Curiae in Support of Petitioners and in Support of Reversal at 12, *FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760 (2016) (No. 14-840).

<sup>161</sup> *Id.* at 13.

market conduct, giving FERC authority over core functions of the markets relating directly to jurisdictional rates. This was no overnight shift, but was decades in the making.

1. FERC Interprets “Practices” for Section 205 Filings: The *Prior Notice* Order

The modern evolution of “practices affecting rates” authority began just before Order 888’s promulgation, with the 1993 *Prior Notice* proceeding,<sup>162</sup> FERC’s first significant analysis of “practices.” Events leading to *Prior Notice* started with the Public Utility Regulatory Policies Act of 1978,<sup>163</sup> which promoted conservation and alternative forms of electricity production with financial incentives. This led to the rise of nonutility generators in competition with incumbent utilities,<sup>164</sup> and pressure by those generators for access to the electric transmission grid.<sup>165</sup> The 1992 Energy Policy Act responded with a provision stimulating growth of “merchant generators” (generators that produced electricity but served no retail customers)<sup>166</sup> and a largely ineffective provision that authorized FERC to order electric utilities’ “wheeling” of power (transmitting power for third parties) over their transmission lines.<sup>167</sup> These developments, among others, prompted FERC to take steps to authorize wholesale sellers to charge market-based rates for their electricity sales.<sup>168</sup>

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<sup>162</sup> *Prior Notice and Filing Requirements Under Part II of the Federal Power Act*, 64 FERC ¶ 61,139, *order on clarification*, 65 FERC ¶ 61,081 (1993) [hereinafter *Prior Notice*].

<sup>163</sup> Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617 (codified as amended at 16 U.S.C. §§ 2601–2645). PURPA promoted conservation programs and alternative forms of electricity production by providing financial incentives to new, nonutility producers of renewable electricity and cogeneration, designated as qualifying facilities (QFs). Eisen, *Regulatory Linearity*, *supra* note 26, at 549. The requirements for QFs are found at 18 C.F.R. pt. 292.203.

<sup>164</sup> Eisen, *Regulatory Linearity*, *supra* note 26, at 549-50; Hoecker & Smith, *supra* note 8, at 75.

<sup>165</sup> Hammond & Spence, *supra* note 8, at 151.

<sup>166</sup> *Market Oversight Glossary*, FED. ENERGY REG. COMMISSION, <http://www.ferc.gov/market-oversight/guide/glossary.asp> (defining a “merchant generator” as “[a] generating plant built with no energy sales contracts in place”). As Professors Hammond and Spence note, this type of arrangement was virtually unheard of prior to 1980. Hammond & Spence, *supra* note 8, at 151; *see also* Eisen, *Regulatory Linearity*, *supra* note 26, at 550 (discussing the rapid growth of the wholesale power market in the 1990s).

<sup>167</sup> Eisen, *Regulatory Linearity*, *supra* note 26, at 550; Hoecker & Smith, *supra* note 8, at 75 (noting procedural limitations of actions under the statute). Later, Order 888 replaced this provision.

<sup>168</sup> Spence & Prentice, *supra* note 118, at 147-48. The current requirements for

The initial surge of market-based rate proposals led to the *Prior Notice* order, which dealt with section 205's filing requirement and discussed filing of non-jurisdictional "practices" connected to activities over which FERC did have jurisdiction. As such, it was an essential building block for FERC's broader authority over practices affecting rates.

*Prior Notice* emerged from FERC's 1991 *Central Maine* decision.<sup>169</sup> Central Maine Power had fourteen market-based rate agreements to sell power at wholesale. These agreements had expired, but Central Maine had not filed them with FERC. Liability was clear — the utility had violated section 205<sup>170</sup> — and the remedy seemed straightforward: FERC would announce that Central Maine was required to file its agreements before commencing service — not after it ended — and impose a penalty. FERC did just that.

If FERC had stopped there, the case would have had limited effect. However, FERC was concerned about filing delays by utilities selling both at market-based rates and at cost-based (that is, traditional) rates, and decided to comprehensively address these delays.<sup>171</sup> To prompt compliance, it announced an amnesty period: sellers had 60 days after the *Central Maine* order to file their agreements.

FERC believed this would affect only a handful of "careless companies,"<sup>172</sup> but the "file or else" position immediately created far more widespread uncertainty. FERC appeared to be systematically putting teeth into the filing requirement, which made utilities nervous.<sup>173</sup> Utilities wondered whether they had to file documents they had assumed required no FERC approval, and there were many

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market-based rate ("MBR") authority for wholesale sales of energy, capacity, and ancillary services are spelled out in FERC Order 697, promulgated in 2007. Market-Based Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Public Utilities, Order No. 697, 72 Fed. Reg. 72,239, 72,240-72,241 (Dec. 20, 2007) (to be codified at 18 C.F.R. pt. 35); Spence & Prentice, *supra* note 118, at 147-48.

Courts have upheld FERC's use of market-based rates. *California ex rel. Harris v. FERC*, No. 12-71958 at 7 (9th Cir. 2015) (holding that FERC used an improper methodology to evaluate market power in the California electricity crisis, but upholding FERC's basic MBR authority); *California ex rel. Lockyer v. FERC*, 383 F.3d 1006, 1017 (9th Cir. 2004). *See generally* Hammond & Spence, *supra* note 8, at 152 ("FERC began to authorize most wholesale sellers of electricity to charge market-based rates.").

<sup>169</sup> *See* Cent. Me. Power Co., 56 FERC ¶ 61,200 (1991).

<sup>170</sup> Rokach, *supra* note 66, at 87.

<sup>171</sup> *Report of the Committee on Electric Utility Regulation*, 15 ENERGY L.J. 505, 528 (1994).

<sup>172</sup> Rokach, *supra* note 66, at 90 (noting that FERC received hundreds of filings).

<sup>173</sup> *See id.* at 85.

such situations. Consider a utility's contract to rent space on its pole to a phone company, which the utility might not file because FERC lacked jurisdiction over the phone company. Was it now required to file it? Surveying the situation, the Edison Electric Institute, the trade association representing major utilities, complained to FERC that, "confusion existed as to the extent of the FERC's jurisdiction over electric rates and which ancillary contracts the Commission would decide utilities must file under the FPA."<sup>174</sup>

Recognizing the problem, FERC convened an industry-wide technical conference, designed to develop policies for filing expired agreements<sup>175</sup> but quickly expanding well beyond that. Utilities raised questions about the scope of FERC's jurisdiction over forty separate categories of activities. The eventual result was the *Prior Notice* order and its jurisdictional "Appendix"<sup>176</sup> covering numerous specific situations and deciding with respect to each "how close a connection must the FERC make between an agreement and the activities Congress ordered the Commission to regulate in order to exercise jurisdiction."<sup>177</sup> FERC specifically linked its new thoroughness to ongoing industry changes.<sup>178</sup>

FERC's analysis of the "contributions in aid of construction" ("CIAC") issue illustrates *Prior Notice's* importance. CIAC involves a situation where a utility customer requests new facilities or upgrades to existing ones. The utility agrees to construct the upgrades, and the customer agrees to pay for the upgrades separately, that is, "contribute" up front to the construction cost. Many industry participants thought CIAC agreements, being construction contracts, did not have to be filed because they related to construction of transmission lines (regulated by state law) and not to transmission of electricity (over which FERC has jurisdiction).

FERC disagreed. In *American Municipal Power-Ohio v. Ohio Edison*<sup>179</sup> decided before *Prior Notice*, Ohio Edison executed an agreement with American Municipal Power-Ohio ("AMP-Ohio") that provided for CIAC in exchange for Ohio Edison building transmission facilities to

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<sup>174</sup> *Id.* at 94.

<sup>175</sup> *Id.* (observing that FERC was surprised by the number of jurisdictional issues raised); *Report of the Committee on Electric Utility Regulation*, *supra* note 171, at 528.

<sup>176</sup> The Appendix is set forth at *Prior Notice*, *supra* note 162, 64 FERC ¶¶ 61,984–61,996.

<sup>177</sup> Rokach, *supra* note 66, at 99.

<sup>178</sup> *See id.* at 94.

<sup>179</sup> *Am. Muni. Power-Ohio, Inc. v. Ohio Edison Co. (AMP-Ohio)*, 57 FERC ¶ 61,358 (1991), *reh'g denied*, 58 FERC ¶ 61,182 (1992).

interconnect Ohio Edison to an AMP-Ohio member. AMP-Ohio agreed to pay for these in advance. FERC held the CIAC agreement covered facilities that Ohio Edison used “in connection with” jurisdictional transmission service “because it involves facilities necessary in order to provide jurisdictional service; indeed, the new interconnection was intended to improve jurisdictional service that Ohio Edison provides to AMP-Ohio.”<sup>180</sup> Therefore, FPA section 205 required filing of the contract, even though FERC had no jurisdiction over the underlying construction.

In the *Prior Notice* proceeding, utilities sought to clarify this position. What if the facility being constructed was a generating plant? One utility contended that agreements for construction of generating plants are exclusively state jurisdictional matters, notwithstanding that the plant might connect to and use the interstate transmission grid.

The *Prior Notice* order and Jurisdictional Appendix responded,

[T]he question of our jurisdiction over a particular contract depends on whether the contract contains a rate or charge for or in connection with the transmission or sale of electric energy in interstate commerce, or whether the contract affects or relates to such rates or service.

[CIAC] agreements which must be filed for Commission [rate] review must relate to transmission in interstate commerce or sales for resale of electric energy in interstate commerce. . . .

As we noted earlier, even in . . . our most recent order on the subject, we held that in order to come within our purview, the agreement must contain a charge connected to jurisdictional service.

This established several important principles and opened doors to the future. A direct connection to rates made a “practice” of a third party such as a construction firm jurisdictional, extending FERC authority to matters beyond the utility’s own “price, availability, firmness, duration or other terms or conditions of any existing services.”<sup>181</sup> Directness meant a connection measured in economic

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<sup>180</sup> *Id.* ¶ 61,161; *see also* S. Cal. Edison Co., 98 FERC ¶ 61,304, 62,301 (2002) (citing *AMP-Ohio*); Re W. Mass. Elec. Co., 61 F.E.R.C. ¶ 61,182, 61,662–61,663 (1992) (citing *AMP-Ohio* and requiring filings of specified agreements as jurisdictional CIAC agreements).

<sup>181</sup> Massey, Fleishman, & Doyle, *supra* note 157, at 329 (quoting *City of San Diego v. San Diego Gas & Elec. Co.*, 51 FERC ¶ 61,058 (1990)).

terms: a document was jurisdictional if it contained a charge folded directly into wholesale rates.

Even more important was that the economic connection between the activity and jurisdictional service did not have to be immediate. FERC stated that it had “considerable flexibility in determining what rates and practices are ‘for or in connection with,’ ‘affecting,’ ‘pertaining’ or ‘[relating] to’ jurisdictional service and, accordingly, must be filed . . . .”<sup>182</sup> The activity only had to be connected to rates or services over which FERC had jurisdiction, so it was sufficient if it would influence rates later. The critical link was that “the contract affects or *relates to* [wholesale] rates or service.”<sup>183</sup> FERC marshaled cases and agency decisions to support this broad view of its authority. For example, it relied on an Eighth Circuit decision involving natural gas activities, which found FERC had authority over those activities undertaken “in connection with” jurisdictional service,<sup>184</sup> and cited *City of Cleveland*. And it stated that filing was required even if state laws governed the underlying activities.

FERC stated this was its general position on its jurisdiction, which left the agency much discretion to resolve specific situations. For over twenty years, *Prior Notice* has been a cornerstone of the agency’s approach to the filing requirement, cited often in agency proceedings.<sup>185</sup>

## 2. Toward a New Meaning of “Practices” and a Limiting Principle

*Prior Notice* gave more depth to the filing requirement’s purpose of transparency and awareness by requiring utilities to give FERC “prior notice” of a wider range of documents that could affect customers’ rates. But its “directness” principle now extends more broadly to FERC’s “practices affecting rates” jurisdiction in the market setting. As the Court has stated, FERC can assert authority to act on matters in modern wholesale markets “directly affecting” market rates.

Arriving at this conclusion required some interpretive building blocks. First, the meaning of “practices” needed to adjust once again,

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<sup>182</sup> *Prior Notice*, *supra* note 162, 64 FERC ¶ 61,987.

<sup>183</sup> *Id.* ¶ 61,990 (emphasis added).

<sup>184</sup> *Id.* ¶ 61,987 (citing *N. Nat. Gas Co. v. FERC*, 929 F.2d 1261 (8th Cir. 1991), *cert. denied*, 112 S. Ct. 169 (1991)).

<sup>185</sup> An online research query yielded 463 decisions citing *Prior Notice*, the vast majority of which are FERC agency decisions. In addition to interpretive issues, issues relating to waiver of the notice requirement arise frequently. See, e.g., *SPS Atwell Island, LLC*, 152 FERC ¶ 61,080, 61,463–61,464 (July 28, 2015) (rejecting a waiver request).

to encompass aspects of market operation filed in ISO/RTOs' tariffs rather than in firm-specific tariffs. This was an issue *Prior Notice* could not have addressed, as it predated the markets. That adjustment happened without comment or controversy, as the law relating to tariff filings simply carried over from the pre-market era. Numerous contemporary agency decisions citing *Prior Notice* use its standard and the *City of Cleveland* "significance" requirement to determine the extent of FERC filing jurisdiction,<sup>186</sup> without judicial challenge. And FERC has cited *City of Cleveland* numerous times as the standard for detail in ISO/RTOs' tariffs.<sup>187</sup>

The more difficult matter concerns practices that are *not* filed in ISO/RTOs' tariffs but have "direct" and "significant" impacts on rates. Here, too, the direct connection and significance requirements of *Prior Notice* and *City of Cleveland* have carried over to the modern setting. Before *FERC v. EPSA*, courts expressed FERC's authority over these "practices affecting rates" in various different ways, without one consistent verbal formulation emerging. They gave FERC authority to regulate "key input[s] into the market-based mechanism," "matters most appropriately resolved by [FERC] as part of its overriding authority to evaluate and implement all applicable wholesale rate schedules," and terms that "directly and significantly affect the wholesale rates at which the operating companies exchange energy." The requirement of a direct economic relationship continued, as did the requirement that practices can be remedied only if FERC finds that a specific practice has caused undue discrimination.

*FERC v. EPSA* more precisely defines the shift from a focus on individual firms to market operations — and confirms and limits it. Prior to *FERC v. EPSA*, no single judicial decision addressed the scope of "practices affecting rates" as comprehensively as *New York v. FERC* did in the discrimination context. Instead, courts focused on specific practices rather than enunciating broad principles, making it sometimes appear as if the doctrine had developed haphazardly. To

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<sup>186</sup> See, e.g., *Midcontinent Indep. Sys. Operator, Inc.*, 152 FERC ¶ 61,073 (July 27, 2015) (agreement for development of a transmission line held jurisdictional, under the *Prior Notice* standard).

<sup>187</sup> See, e.g., *Cal. Indep. Sys. Operator Corp.*, 152 FERC ¶ 61,063 (July 21, 2015) (requiring readiness criteria to be incorporated in the California ISO tariff); *PJM Interconnection, LLC*, 140 FERC ¶ 61,222 (Sept. 20, 2012).

Some decisions have allowed ISO/RTOs to specify certain market rules in ancillary documents such as business practice manuals, rather than in the tariffs themselves. *Midwest Indep. Transmission Sys. Operator, Inc.*, 136 FERC ¶ 61,038 (July 19, 2011); *Midwest Indep. Transmission Sys. Operator, Inc.*, 147 FERC ¶ 61,268 (June 30, 2014) (requiring filing in the tariff rather than in a business practice manual).

compound the problem, some decisions reached back to the past for insights without acknowledging historical shifts in the meaning of “practices,” or occasionally took prior cases out of context or misconstruing them.

After *FERC v. EPSA*, FERC’s authority is broad, like the historical authority over “practices.” As the Court noted, the breadth of “practices” and “affecting” gives FERC tremendous flexibility, but also portends regulatory overreach if not carefully limited. Taken in their entirety, and viewed against the historical context, *FERC v. EPSA* and the cases that preceded it provide a limiting principle. The limiting principle inherent in the “practices” “directly affecting” rates formula can be summarized as this: FERC’s “practices” jurisdiction extends to terms and conditions of the operation of wholesale markets which impact the wholesale markets directly and significantly, or are integral to the proper functioning of the wholesale markets, but not practices that have only a remote or insignificant connection. Applying this principle gives appropriate limits to reduce any lingering uncertainty about the scope of “practices” “directly affecting” wholesale rates — and holds important implications for the jurisdictional dividing line between states and FERC.

### C. D.C. Circuit Cases Supporting and Limiting Authority over Practices Affecting Rates

In numerous cases dating to the 1970s, the D.C. Circuit held FERC has authority to regulate practices directly affecting the wholesale markets. These cases began with a line of precedents strengthening FERC’s authority to review rules related to capacity markets, in which owners of power plants are paid to have capacity available if needed in the future.<sup>188</sup> Capacity markets are thought to be necessary because prices in other ISO/RTO markets are not always sufficiently high to keep existing plants from shutting down or to entice new plants to enter the market. Specifying the amount of capacity — the amount of generation needed on the system — has consistently been viewed as a factor within FERC’s control. It can have impacts on states’ authority

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<sup>188</sup> Hammond & Spence, *supra* note 8, at 153; Paul L. Joskow, *Competitive Electricity Markets and Investment in New Generating Capacity*, MIT ECON. (June 12, 2006), available at <http://economics.mit.edu/files/1190>. Not all ISO/RTOs have forward capacity markets, although the PJM, New England and New York systems do. Capacity markets generally seek to have generation capacity online and ready to produce electricity at least one year ahead of time. *RPM Base Residual Auction FAQs*, PJM INTERCONNECTION, LLC, <https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/rpm-base-residual-auction-faqs.ashx> (last visited Jan. 24, 2016) (three-year time horizon).

to approve requests to build power plants, because it decides how much capacity is needed in the region (a factor states traditionally take into account when deciding whether power plants should be built). This did not stop the D.C. Circuit from supporting FERC's actions.

### 1. Capacity Market Cases

The first case involving FERC's authority to regulate capacity in wholesale transactions, *Municipalities of Groton v. FERC*,<sup>189</sup> involved the New England Power Pool Agreement ("NEPOOL"), a "power pool" that later transformed into ISO-New England.<sup>190</sup> By the 1970s, twenty-one of these interconnected networks of transmission lines enabled coordination among neighboring utilities.<sup>191</sup> Voluntary coordination arrangements could include a variety of services,<sup>192</sup> and pooling had significant benefits for participating utilities, such as reduced investment in generation reserves (power plants kept in reserve to be fired up as needed)<sup>193</sup> and coordinated planning.

These power pools were voluntary, and governed by agreements among their members. In *Municipalities of Groton v. FERC*, the D.C. Circuit upheld FERC's authority to review a section of the NEPOOL Agreement that included a deficiency charge for each participating utility.<sup>194</sup> If that utility's amount of generating capacity fell by more than 1% below the level set in the agreement, it owed a charge to the pool. The challengers argued that FERC lacked jurisdiction over this charge because it was designed solely as an incentive to encourage

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<sup>189</sup> *Municipalities of Groton v. FERC*, 587 F.2d 1296 (D.C. Cir. 1978).

<sup>190</sup> In 1998, FERC granted the New England Power Pool's request for recognition as ISO New England, and approved its proposed market rules. *New Eng. Power Pool*, 83 FERC ¶ 61,045, 85 FERC ¶ 61,379 (1998), *order on reh'g*, 95 FERC ¶ 61,074 (2001).

<sup>191</sup> For a discussion of power pools, see James F. Fairman & John C. Scott, *Transmission, Power Pools, and Competition in the Electric Utility Industry*, 28 *HASTINGS L.J.* 1159, 1168-71 (1977).

<sup>192</sup> Power pools can facilitate matters such as purchase and sale of reserve generating capacity, purchase and sale of electricity during emergencies and maintenance, and seasonal exchange of low-cost energy and centralized coordination of generation based on cost. STEVE ISSER, *ELECTRICITY RESTRUCTURING IN THE UNITED STATES: MARKETS AND POLICY FROM THE 1978 ENERGY ACT TO THE PRESENT* 122-23 (2015).

<sup>193</sup> "Reserve generating capacity" is "generating capacity available to meet peak or abnormally high demands for power and to generate power during scheduled or unscheduled outages." *Glossary*, U.S. ENERGY INFO. ADMIN., <http://www.eia.gov/tools/glossary/index.cfm?id=R> (last visited Jan. 24, 2016).

<sup>194</sup> *Municipalities of Groton*, 587 F.2d at 1301; *see also* *Cent. Iowa Power Coop. v. FERC*, 606 F.2d 1156, 1160 (D.C. Cir. 1979) (holding that FERC could condition approval of a power pool agreement on adoption of specific membership criteria).

participating utilities to have enough generation, and did not represent a charge for a wholesale service or transmission. The court disagreed. It reasoned that “the Commission’s inclusive jurisdictional mandate . . . ‘with respect to’ jurisdictional transmissions, or ‘affecting’ such transmissions or services cannot be parsed so nicely.”<sup>195</sup> The court then concluded: “It is sufficient for jurisdictional purposes that the deficiency charge affects the fee that a participant pays for power and reserve service, irrespective of the objective underlying that charge. This . . . is well within the Commission’s authority . . . .”<sup>196</sup> What mattered was that the charge “affected” transmission rates within FERC’s jurisdiction, not whether this incentive encouraged construction of generating plants over which FERC has no authority.

In more recent decisions, the D.C. Circuit confirmed this approach, concluding that FERC has authority to review a variety of rules related to capacity. In the 2009 decision *Connecticut DPUC v. FERC*,<sup>197</sup> the D.C. Circuit held that FERC had authority to approve the “Installed Capacity Requirement” (“ICR”), the core mechanism of the ISO-New England capacity market. The ICR is a determination of the minimum amount of capacity required on the regional grid, based on forward-looking estimates of peak demand.<sup>198</sup>

The court reasoned that FERC had “practices affecting rates” jurisdiction over the ICR because “capacity decisions . . . affect FERC-jurisdictional transmission rates for that system without directly implicating generation facilities.”<sup>199</sup> The court added, based on *Groton*, that FERC “may directly establish prices for capacity-or . . . prices for failing to acquire enough capacity-even for the express purpose of incentivizing construction of new”<sup>200</sup> power plants. It determined the ICR was not a specific command to anyone to build a specific new power plant, but simply is an estimate of peak demand on the system.<sup>201</sup> Thus, it was not direct regulation over generating facilities:

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<sup>195</sup> *Municipalities of Groton*, 587 F.2d at 1302.

<sup>196</sup> *Id.*

<sup>197</sup> *Conn. Dep’t. of Pub. Util. Control v. FERC*, 569 F.3d 477, 479 (D.C. Cir. 2009), *cert. denied*, 558 U.S. 1110 (2010).

<sup>198</sup> The ICR is the “measure of the installed resources that are projected to be necessary to meet both ISO New England’s and the Northeast Power Coordination Council’s reliability standards, with respect to satisfying the peak demand forecast for New England while maintaining the required reserve capacity.” *Installed Capacity Requirements*, ISO-NEW ENGLAND, <http://www.iso-ne.com/system-planning/resource-planning/installed-capacity-requirements> (last visited Jan. 24, 2016).

<sup>199</sup> *Conn. Dep’t. of Pub. Util. Control*, 569 F.3d at 484.

<sup>200</sup> *Id.* at 482.

<sup>201</sup> *Id.* at 481-82; see Miller, Butterklee & Comes, *supra* note 159, at 452-53

as the Supreme Court later reiterated, “[s]tates retained their ultimate authority over the construction of new generation facilities.”<sup>202</sup>

Similarly, in the 2014 case of *New England Power Generators Ass’n v. FERC*,<sup>203</sup> the D.C. Circuit evaluated FERC’s authority to approve “buyer-side mitigation” measures (the power of large buyers to artificially depress market prices<sup>204</sup>) for the ISO-NE capacity market. This took the form of a test to determine whether a new power plant will unduly depress market prices. Certain new plants are subjected to a minimum bid requirement, known as a “minimum offer price rule” (“MOPR”), which could prevent them from clearing in the capacity market auction. This was controversial because of the potential adverse impact on market prices for certain types of power plants.<sup>205</sup>

The *New England* court held that FERC had authority to require the buyer-side mitigation measures, reasoning that these measures were “a key input into the market-based mechanism” that FERC could regulate because mitigation matters are “affecting or relating to wholesale rates,” and citing *Groton and Connecticut DPUC*.<sup>206</sup> Once again, the D.C. Circuit stressed “that FERC’s mitigation measures here do not entail direct regulation of facilities, a matter within the exclusive control of the states.”<sup>207</sup>

## 2. Transmission Planning and Cost Allocation: *South Carolina Public Service Authority*

The 2014 D.C. Circuit decision in *South Carolina Public Service Authority v. FERC*<sup>208</sup> upheld FERC Order 1000,<sup>209</sup> which reformed the regional process for transmission planning and determining how to allocate the costs of new transmission lines. One part of the opinion addressed the removal of federal right of first refusal provisions, which are the rights of utilities to develop and own transmission lines needed

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(criticizing the ISO-New England approach).

<sup>202</sup> *Elec. Power Supply Ass’n v. FERC*, 753 F.3d 216, 234 (D.C. Cir. 2014), *rev’d and remanded* *FERC v. Elec. Power Supply Ass’n*, 136 S. Ct. 760 (2016).

<sup>203</sup> *New Eng. Power Generators Ass’n v. FERC*, 757 F.3d 283 (D.C. Cir. 2014).

<sup>204</sup> *Miller, Butterklee & Comes*, *supra* note 159, at 456.

<sup>205</sup> *Id.* at 462 (criticizing this test because states will not provide incentives for power plants that would not be paid in energy markets).

<sup>206</sup> *New Eng. Power Generators Ass’n*, 757 F.3d at 290-91 (citing *Conn. Dep’t of Pub. Util. Control*, 569 F.3d at 478, 481).

<sup>207</sup> *Id.*

<sup>208</sup> *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. 2014).

<sup>209</sup> *Id.* at 48-49; *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order 1000, 18 C.F.R. pt 35 (2011).

to serve customers in their own territories, even if other firms are willing to do so.<sup>210</sup> The *South Carolina* court noted that “[r]eforming the practices of failing to engage in regional planning and *ex ante* cost allocation for development of new regional transmission facilities . . . involves a *core reason underlying Congress’ instruction in Section 206.*”<sup>211</sup> The fact that regional transmission planning was a “practice affecting rates” was “illustrated” by the D.C. Circuit decision in *Transmission Access Policy Study Group v. FERC*, the decision upholding Order 888 later affirmed in *New York v. FERC*: each of these activities “directly affects or is closely related to jurisdictional rates.”<sup>212</sup>

This conclusion was appropriate. Transmission planning and cost allocation are “practices affecting rates” because they directly impact market rates. A system with less transmission is more congested — and produces more expensive rates for delivered electricity. And FERC’s authority extends to requiring power transmission planning and cost allocation methods, notwithstanding traditional state authority over transmission siting, because Order 1000 did not expressly intrude on states’ authority to approve individual transmission lines.<sup>213</sup> As in the capacity market cases, FERC can act, as long as it does not directly regulate matters reserved to the states.

Showing that the meaning of “practices” has evolved, the *South Carolina* court rejected an argument based on the Tank Car Case that would have constrained “practices” narrowly to those “that directly relate[] to the . . . service provided customers.”<sup>214</sup> As described above, this is how “practices” was interpreted in the early years after the FPA’s enactment: the terms and conditions of individual firms’ service. But the court rejected this interpretation, stating that, “because rights of first refusal are directly tied to rates charged for electricity transmission, such rights do directly relate to the service that is provided (i.e., the provision of electricity transmission service).”<sup>215</sup> As the court added, “[t]he challenged orders here provide . . . an

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<sup>210</sup> SCOTT HEMPLING, ORDER 1000 NARROWS THE “RIGHT OF FIRST REFUSAL”: WILL REGIONAL PROCESSES BE COST-EFFECTIVE AND NONDISCRIMINATORY? 1 (2012), available at [http://www.scotthemplinglaw.com/files/pdf/ppr\\_memo\\_rofr\\_hempling05032.pdf](http://www.scotthemplinglaw.com/files/pdf/ppr_memo_rofr_hempling05032.pdf).

<sup>211</sup> *S.C. Pub. Serv. Auth.*, 762 F.3d at 57 (emphasis added).

<sup>212</sup> *Id.* at 57, 64 (citing *Transmission Access Policy Study Grp. v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff’d sub nom.*, *New York v. FERC*, 535 U.S. 1 (2002)) (holding that Order 888 aimed to remedy discriminatory practices).

<sup>213</sup> *Id.* at 62; *cf.* Eisen, *Who Regulates the Smart Grid?*, *supra* note 3, at 123 (noting that, “[t]his authority to regulate in mixed jurisdictional settings alone supports upholding Order 745”).

<sup>214</sup> *S.C. Pub. Serv. Auth.*, 762 F.3d at 74-75 n.7.

<sup>215</sup> *Id.*

economic principle that directly ties the practice the Commission sought to regulate to rates,” and “[t]he direct economic relationship between rights of first refusal and rates forecloses any suggestion that characterizing these rights as practices affecting rates was somehow impermissible.”<sup>216</sup>

Prior to *FERC v. EPSA*, a more succinct summary of expansive “practices affecting rates” jurisdiction would have been hard to find. As in the capacity market cases, “practices” are not limited to actions taken by one utility — transmission planning and cost allocation are ISO/RTO-wide actions, requiring actions by multiple parties. This expansive view of authority is nevertheless consistent with the historical interpretation of “practices” which focused on actions impacting consumers. If it finds that transmission capacity in a region is inadequate or the costs of new lines are not allocated properly, FERC may act to blunt potential adverse impacts on electric utility customers. States may have concurrent regulatory authority (for example, their siting authority), but this is not dispositive of FERC’s authority. As long as FERC can trace causation between practices and rates that consists of a direct — but not necessarily immediate — economic connection to wholesale rates, it may regulate the practice.<sup>217</sup>

Note those words: “economic principle” and “direct economic relationship.” This is *Prior Notice* reimagined for the modern setting. The effect on rates must be capable of measurement in economic terms, but need not be immediate. A right of first refusal over construction of a transmission line can impact wholesale rates, but it would take several intermediate steps to do so (for example, the line in question would have to be permitted by a state, and then built). This does not defeat FERC authority.

3. A Limiting Principle for “Practices Affecting Rates”: Practices that Directly Relate to or Are Integral to the Proper Functioning of the Wholesale Markets

This discussion — and even *FERC v. EPSA* — leaves some important questions open to further interpretation. Which features of wholesale markets “directly affect” wholesale rates — and which do not?

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<sup>216</sup> *Id.* at 74-76 nn.7-8.

<sup>217</sup> Hammond & Spence, *supra* note 8, at 198 (observing that, “[t]he historical understanding of the regulatory contract seems to imply that FERC’s authority to ensure rates are “just and reasonable” is limited to serving the *economic* interests of consumers and investors”).

“Directly affecting” is broad; one can think of many routine “practices” of an ISO/RTO, such as personnel decisions, which would not directly impact markets. How should the line be drawn? That is, what connection between market operations and wholesale rates confers jurisdiction on FERC, and how close must that connection be?

*Prior Notice* and *City of Cleveland* have continuing vitality, even as firm-specific tariffs have given way to market tariffs. And focusing on a direct and significant connection between an activity over which FERC asserts jurisdiction and wholesale market rates is a limiting principle confirmed by judicial decisions. As the Supreme Court recognized, the standard’s most precise enunciation is the D.C. Circuit’s “common-sense construction of the FPA’s language” in its 2004 *California Independent System Operator v. FERC (CAISO)* decision:<sup>218</sup> “those methods or ways of doing things on the part of the utility that directly affect the rate or are closely related to the rate, not all those remote things beyond the rate structure that might in some sense indirectly or ultimately do so.”<sup>219</sup>

CAISO began in the California electricity crisis of 2000–2001.<sup>220</sup> When rates skyrocketed, there was plenty of blame to go around. Some fell squarely on the grid operator (the “California ISO,” or “CAISO”), which was faulted for poor oversight of markets that led to high electricity prices.<sup>221</sup> When a corporation performs poorly, directors’ heads’ roll. FERC, California’s governor, and the state legislature all decided CAISO needed a new Board unsullied by the crisis. And it got one, through a new California law that empowered the governor to appoint its five members. When CAISO then requested that FERC approve its market redesign proposal, FERC ordered it to implement a new Board structure that *it* had “proposed” earlier.<sup>222</sup> It reasoned that a state-appointed Board could not be “independent of market participants,” as Order 888 requires. CAISO and others promptly challenged FERC’s action in the D.C. Circuit.

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<sup>218</sup> FERC v. Elec. Power Supply Ass’n, 136 S. Ct. 760, 774 (2016) (citing Cal. Indep. Sys. Operator Corp. v. FERC, 372 F.3d 395 (D.C. Cir. 2004)).

<sup>219</sup> Cal. Indep. Sys. Operator Corp. v. FERC, 372 F.3d 395, 398 (D.C. Cir. 2004).

<sup>220</sup> Scholars have amply documented the numerous policy choices that contributed to the crisis. See, e.g., Steven Ferrey, *The Eagles of Deregulation: The Role of the Courts in a Restructured Environment*, 32 ENVTL. L. 297 (2002).

<sup>221</sup> See *id.* at 304.

<sup>222</sup> Order Concerning Governance of the California Independent System Operator, 100 FERC ¶ 61,059 (2002).

The uniqueness and perceived egregiousness of FERC's action obviously piqued the D.C. Circuit.<sup>223</sup> Using a *Chevron* analysis, the court barred FERC's interpretation of "practices affecting rates" under step one. The court found it "crystal clear" that interfering with a board's composition has no direct connection to rates.<sup>224</sup> Then, it decided that the words surrounding "practice" in section 205 were "transactional terms," none of which "suggest a congressional concern with corporate governance or structure."<sup>225</sup> As the court observed:

It is quite a leap to move as FERC has from that context of transactional terms to an implication that by the word "practice," Congress empowered the Commission not merely to effect a reformation of some "practice" in a more traditional sense of actions habitually being taken by a utility in connection with a rate found to be unjust or unreasonable, but also to empower the Commission to reform completely the governing structure of the utility . . . .<sup>226</sup>

In response, FERC argued that it could regulate the "infinite" (that is, all) of practices involved in the wholesale markets, plucking that word from *City of Cleveland*. The court rejected this, retorting sharply: "We are not biting."<sup>227</sup> It noted (correctly) that *City of Cleveland* did not fix the limits of FERC's jurisdiction, but cited it and *Michigan Wisconsin* for its limit on jurisdiction, although that case also dealt with the filing requirement.<sup>228</sup>

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<sup>223</sup> Its analysis begins with the following statement:

First, lest there be any mistake, FERC has done nothing less than order a public utility subject to its regulation to replace its governing board. We offer no citation to any comparable order by FERC, or any other similar federal regulatory body, because to the best of our knowledge, there is none.

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

<sup>224</sup> *Id.* at 400.

<sup>225</sup> *Id.*

<sup>226</sup> *Id.*

<sup>227</sup> *Id.* at 401.

<sup>228</sup> Compare *id.*, with *Calpine Corp. v. FERC*, 702 F.3d 41, 47-48 (D.C. Cir. 2012), where the court rejected FERC jurisdiction over "station power" by relying in part on *City of Cleveland*. Station power is generally defined as "[e]nergy that is used to operate an electric generating plant . . . lighting, power, and auxiliary facilities, regardless of whether the energy is produced at the plant or comes from another source." See *Glossary*, U.S. ENERGY INFO. ADMIN., <http://www.eia.gov/tools/glossary/index.cfm?id=R> (defining "station use," a term interchangeable with the Calpine Corp. court's working definition of station power).

Not done yet, the court reached back into history. Citing the Tank Car Case, the court stated that the Supreme Court had interpreted “practices” there to refer “only to a railroad’s terms of service and rejected a broader construction in which ‘it could be contended . . . that every detail of railroad operation is a practice within the meaning of the Act.’”<sup>229</sup> This implies the Tank Car Case set a precise limit on defining “practices,” which is off the mark. Also, it misses entirely the Tank Car Case’s context involving private cars, and the case’s preservation of the ICC’s broad powers to define and remedy discriminatory practices.

Despite these errors, the CAISO court articulated a compelling test for “practices affecting rates,” citing to the D.C. Circuit’s previous decision in *American Gas Ass’n v. FERC*,<sup>230</sup> a case involving the natural gas industry. In upholding FERC’s jurisdiction to issue portions of its natural gas restructuring orders, the D.C. Circuit had held that FERC’s reading of “contracts affecting” its jurisdictional rates was restricted by the statute because “[c]ontracts that ‘affect’ a rate indirectly, merely by affecting the costs that determine what pipeline sales rates are permissible under the NGA’s ‘just and reasonable’ standard, are beyond [the NGA’s] reach.”<sup>231</sup> Echoing that test, CAISO limited “practices” to include “those methods or ways of doing things on the part of the utility that directly affect the rate or are closely related to the rate, not all those remote things beyond the rate structure that might in some sense indirectly or ultimately do so.”<sup>232</sup> Replacing ISO board members was not a “practice,” as it did not affect rates directly.

Streamlining this test in harmony with *FERC v. EPSA*, FERC’s jurisdiction extends to “methods or ways of doing things” which “directly affect” the wholesale markets or are integral to the proper functioning of the wholesale markets, but not practices that are remote or insignificant in their connection to the markets. In the demand response context and elsewhere, the term “utility” in the CAISO test must be read to mean “the ISO or RTO.” CAISO involved an entity regulated as a “public utility” under the FPA: the California ISO. The CAISO test can only apply directly to market activities of entities that FERC regulates as “public utilities,”<sup>233</sup> and not to others, such as

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<sup>229</sup> *Cal. Indep. Sys. Operator Corp.*, 372 F.3d at 402 (citing *United States v. Pa. R.R. Co.*, 242 U.S. 208, 228-33 (1916)).

<sup>230</sup> *Id.* at 403 (citing *Am. Gas Ass’n v. FERC*, 912 F.2d 1496 (D.C. Cir. 1990)).

<sup>231</sup> *Am. Gas Ass’n v. FERC*, 912 F.2d 1496, 1506 (D.C. Cir. 1990).

<sup>232</sup> *Cal. Indep. Sys. Operator Corp.*, 372 F.3d at 403 (citing *Am. Gas Ass’n*, 912 F.2d at 1506).

<sup>233</sup> *Wellinghoff & Morenoff*, *supra* note 50, at 404 n.64.

demand response providers. Non-jurisdictional entities subject themselves to FERC oversight by participating in the wholesale markets and thereby directly affecting rates.

Under this standard, a direct connection to rates is critical, because that means consumers can be harmed if FERC cannot regulate the activities in question. It stretches credulity to imagine that changes in the composition of an ISO board could harm consumers, although one could hypothesize that it might. (Suppose all appointed board members swore to prevent renewable resources from entering the market, thinking them unreliable.) By contrast, an activity such as transmission planning so directly affects rates that FERC should be able to oversee it.

*FERC v. EPSA's* focus on directness is consistent with historical interpretations of “practices affecting rates.” It continues the focus from pre-1980 cases and from *Prior Notice* on a direct relationship to wholesale rates,<sup>234</sup> even though the focus has shifted from an individual utility’s service to the ability of the wholesale market to serve customers. The directness standard derives further support from earlier cases that mention the closeness of the relationship between jurisdictional practices and wholesale rates. For example, in the 1988 *Schneidewind* case, the Supreme Court held that FERC had authority to regulate a natural gas company’s capital structure because that is “related directly to the rates FERC allows it to charge.”<sup>235</sup>

Another significant line of cases supporting the concept of directness is the “cost trapping” decisions from the 1980s that held that FERC has authority over “matters most appropriately resolved by [FERC] as part of its overriding authority to evaluate and implement all applicable wholesale rate schedules.”<sup>236</sup> In these cases, FERC had made decisions about how to allocate costs of cancelled nuclear plants among utilities participating in multistate agreements. Some states felt the allocations were unfair to their ratepayers, and declined to “pass them through” into retail rates. The Supreme Court and several appellate courts held this was impermissible and that states had to give

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<sup>234</sup> Massey, Fleishman & Doyle, *supra* note 157, at 329.

<sup>235</sup> *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 301, 308 (1988); *cf.* *N. Natural Gas Co. v. State Corp. Comm'n*, 372 U.S. 84, 92 (1963) (noting “the Federal [Power] Commission’s authority to regulate the *intricate relationship* between the purchasers’ cost structure and eventual costs to wholesale customers who sell to consumers in other States” (emphasis added)).

<sup>236</sup> James W. Moeller, *Requiem for the Public Utility Holding Company Act of 1935: The “Old” Federalism and State Regulation of Inter-State Holding Companies*, 17 ENERGY L.J. 343, 377 & n.325–26 (1996).

binding effect to FERC's wholesale cost determinations;<sup>237</sup> to hold otherwise would interfere with FERC's power to regulate "practices affecting rates."<sup>238</sup> FERC could review capacity cost allocations because "[c]apacity costs are a large component of wholesale rates" and "while these provisions do not fix wholesale rates, their terms do *directly and significantly* affect the wholesale rates at which the operating companies exchange energy . . . ."<sup>239</sup>

#### IV. APPLICATIONS AND IMPLICATIONS OF APPLYING THE STANDARD

Because the directness standard could potentially be viewed as somewhat indeterminate, this Part clarifies it. The discussion here centers on "close call" cases that involve activity that appears to "directly affect" wholesale rates, but also seems to involve matters arguably outside of FERC's purview. Numerous activities appear to "affect" or "relate" to wholesale electricity markets. The limiting principle discussed above cabins FERC's authority to those practices that directly affect wholesale rates, system reliability, and the supply and pricing of energy at wholesale. By contrast, practices involving steel and labor — mentioned by the D.C. Circuit — do not have this kind of direct and significant effect on markets.

Where should the line be drawn? The discussion focuses on two different policies: demand response compensation under Order 745 (now upheld in *FERC v. EPSA*), and a hypothetical "carbon adder" that an ISO/RTO would propose to add an amount to the bid price of sellers in the energy wholesale market it administers "to better account for the full social costs of that electricity" in energy markets.<sup>240</sup> A related set of situations discussed here relates to preemption cases involving the electric grid, where the issue involves deciding whether FERC's actions preempt state laws designed to promote innovations in the electric grid.

Regarding the carbon adder, many have argued that the wholesale markets value low-cost electricity, not environmentally friendly electricity. They claim markets "do not price externalities and

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<sup>237</sup> *Miss. Power & Light Co.*, 487 U.S. 354, 356-57 (1988); *Nantahala Power & Light Co. v. Thornburg*, 476 U.S. 953, 965 (1986).

<sup>238</sup> See *Miss. Indus. v. FERC*, 808 F.2d 1525, 1539-44 (D.C. Cir. 1987), *reh'g en banc granted in part, opinion vacated in part*, 814 F.2d 773 (D.C. Cir. 1987), *vacated*, 822 F.2d 1103 (D.C. Cir. 1987), *opinion reinstated, reh'g en banc denied*, 822 F.2d 1103 (D.C. Cir. 1987), and *opinion vacated in part on reh'g*, 822 F.2d 1104 (D.C. Cir. 1987).

<sup>239</sup> *Id.* at 1542 (emphasis added).

<sup>240</sup> *Hammond & Spence*, *supra* note 8, at 197-98.

reliability well,”<sup>241</sup> failing to account for externalities favoring fossil fuel-fired generation over other sources (notably renewables and nuclear). Some call for a carbon price to address this situation; others believe FERC lacks authority to impose one.<sup>242</sup> Still others have called for a carbon adder as an option to facilitate compliance under the Clean Power Plan, which EPA explicitly contemplates in its final rule.<sup>243</sup> FERC is likely reluctant to propose a carbon price,<sup>244</sup> but if it chose to do so, could it ground one as a “practice affecting rates”? Providing further detail about the “directly affecting” standard yields the answer: it could.

A. *Four Factors for More Clearly Fixing the Limits of FERC's Authority*

This section discusses four factors to be used as guidelines in ascertaining whether specific activities fit within FERC's authority. It concludes that the Supreme Court properly found that FERC has the authority to make rules establishing demand response compensation, and also concludes that FERC could impose the hypothetical carbon adder. The four factors outlined here help define the dividing line between federal and state jurisdiction, based on the “directly affecting” standard.

1. *FERC Is Regulating Wholesale Market Participants in Their Trading Activities*

As the Court noted in *FERC v. EPSA*, “demand response programs work through the [regional grid] operators’ regular auctions,” and “every aspect of the regulatory plan happens exclusively on the wholesale market and governs exclusively that market’s rules.”<sup>245</sup> This confirms FERC’s authority over the conduct of entities participating in markets by virtue of its approval of market *pro forma* tariffs and the rules contained in them. Thus, an activity is jurisdictional if it involves FERC regulation of market rules or other aspects of direct participation by jurisdictional entities (or those that could be, by meeting criteria for participation).

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<sup>241</sup> Hammond & Spence, *supra* note 8, at 197; see BENJAMIN K. SOVACOO, *THE DIRTY ENERGY DILEMMA: WHAT'S BLOCKING CLEAN POWER IN THE UNITED STATES* 4 (2008).

<sup>242</sup> Moot, *supra* note 16, at 348.

<sup>243</sup> Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,661, 64,836 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60).

<sup>244</sup> Hammond & Spence, *supra* note 8, at 197-98.

<sup>245</sup> *FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 770, 776 (2016).

An example involves approval of requirements for participation in wholesale markets. For example, the PJM RTO criteria for demand response aggregators (which PJM calls “curtailment service providers,” or “CSPs”)<sup>246</sup> include such matters as “appropriate operational infrastructure and a full understanding of all the wholesale market rules and operational procedures.”<sup>247</sup> Wholesale markets also have detailed specifications for CSP participation.<sup>248</sup>

No state should be able to set these rules, as they are central to the markets’ proper functioning. If, for example, states decided to set different requirements for trading on wholesale markets, the result would be chaos. Consider the analogy of a stock exchange, another type of interstate transactional marketplace where market operator rules are filed for approval with a federal regulator (in this case, the SEC). Stock exchanges regulate members’ ability to participate in the markets — how they qualify as members (minimum capital requirements, for example), how they bid, how they handle and settle orders, and so forth. If these procedural features of the market were not subject to oversight by a central clearinghouse, it could lead to fraud or other dysfunctions.<sup>249</sup>

The converse of this is that FERC cannot regulate conduct as “practices” that does not involve direct market participants. Recall the earlier example of the proposed shoe manufacturing plant in Massachusetts.<sup>250</sup> The shoe company would not face regulation under

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<sup>246</sup> PJM INTERCONNECTION, LLC, PJM MANUAL 11: ENERGY & ANCILLARY SERVICES MARKET OPERATIONS 109 (rev. Dec. 17, 2015), available at <http://www.pjm.com/~media/documents/manuals/m11.ashx>.

<sup>247</sup> *Demand Response*, PJM, <http://www.pjm.com/markets-and-operations/demand-response.aspx> (last visited Jan. 24, 2016); *PJM Tools FAQs*, PJM, <http://learn.pjm.com/three-priorities/keeping-the-lights-on/pjm-tools-faqs.aspx> (last visited Jan. 24, 2016); *Retail Electricity Consumer Opportunities for Demand Response in PJM’s Wholesale Markets 2*, PJM, <https://www.pjm.com/~media/markets-ops/dsr/end-use-customer-fact-sheet.ashx> (last visited Jan. 24, 2016).

<sup>248</sup> For example, PJM has detailed rules for CSP participation, such as requirements to identify specific demand reduction resources by location and load reduction capability. PJM INTERCONNECTION, LLC, *supra* note 246, at 110.

<sup>249</sup> One exception to FERC’s authority over the markets involves its limited ability to curb market manipulation, as shown by *Hunter v. FERC*, 711 F.3d 155 (D.C. Cir. 2013). In *Hunter*, the D.C. Circuit held that FERC lacked authority to fine a former natural gas trader for his allegedly fraudulent actions, determining that Hunter was subject to the jurisdiction of the Commodity Futures Trading Commission because his scheme operated solely within the commodity futures market. See William Scherman, John Shepherd & Jason Fleischer, *The New FERC Enforcement: Due Process Issues in the Post-EPA Act 2005 Enforcement Cases*, 31 ENERGY L.J. 55, 77-78 (2010).

<sup>250</sup> See *supra* notes 48–49 and accompanying text.

the FPA because it does not trade on the wholesale markets. State regulatory judgments about the siting and location of the proposed plant would not be supplanted, even if they might subsequently impact the wholesale price of electricity. For this reason alone, the D.C. Circuit erred when it found that FERC could theoretically regulate the steel and labor markets. This slippery slope argument<sup>251</sup> had no support in the law, because it was inconsistent with the limitation to market participants. There is a robust body of literature on slippery slope reasoning, which illustrates the many problems in using it in cases such as this.<sup>252</sup>

As the Supreme Court noted, allowing FERC to regulate wholesale market participants does not completely strip states of their authority over such activities as demand response. Under FERC's Order 719, through its licensing authority, "any State regulator [could] prohibit its consumers from making demand response bids in the wholesale market."<sup>253</sup> This authority is similar to the securities context, where state blue sky laws' registration requirements govern broker-dealers' bona fides. Like that context, state licensing requirements cannot create an undue burden on participation in interstate markets, as the D.C. Circuit has confirmed in rejecting a state's demand response licensing requirement it felt intruded on FERC's authority.<sup>254</sup> Neither could a state simply bar CSPs from participating in wholesale markets. Under a dormant Commerce Clause analysis, states that barred individual firms from doing business on an interstate market would

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<sup>251</sup> "A slippery slope always assumes a chain reaction of cause-effect events which result in some eventual dire outcome." *Common Fallacies In Reasoning*, FULLERTON.EDU, <http://commfaculty.fullerton.edu/rgass/fallacy3211.htm> (last visited Feb. 23, 2016).

<sup>252</sup> See, e.g., Eugene Volokh, *The Mechanisms of the Slippery Slope*, 116 HARV. L. REV. 1027 (2003) (citing numerous articles and books).

<sup>253</sup> FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 770, 772 (2016); 18 C.F.R. § 35.28(g)(1)(i)(A) (2015) (ISO/RTOs may not accept demand response bids where they are "not permitted by the laws or regulations of the relevant electric retail regulatory authority"). To take one example of how this might work in practice, a state could limit a CSP's license to implementing a retail-level demand response program on behalf of a utility.

Also, in that part of the nation without wholesale markets, demand response is done at the retail level only. Individual utilities are responsible for demand response in those states, and subject to state regulatory authority only.

<sup>254</sup> Ind. Util. Regulatory Comm'n v. FERC, 668 F.3d 735 (D.C. Cir. 2012) (overturning an Indiana state law precluding customers from enrolling with aggregators without the state commission's prior approval); Eisen, *Who Regulates The Smart Grid?*, *supra* note 3, at 84 (describing barriers to demand response participation).

almost certainly be impermissibly regulating these firms' reach beyond the state.<sup>255</sup>

The carbon adder proposal would receive unequivocally favorable treatment under this guideline. If the carbon price were structured as an additional amount applying to sellers of generated electricity into the markets, it would meet this guideline because it applies to buyers and sellers, and not to any other entity.

## 2. FERC Is Addressing System Adequacy by Regulating the Quantity of Inputs to the Markets

The second factor derives from FERC's mandate to ensure the reliability of the wholesale power system. Throughout *FERC v. EPSA*, the Supreme Court emphasized that "[i]n promoting demand response, FERC did no more than follow the dictates of its regulatory mission to improve the competitiveness, efficiency, and reliability of the wholesale market."<sup>256</sup> Writing for the majority, Justice Kagan summarized the myriad of ways that expanded demand response can improve system reliability.<sup>257</sup> This focus on system reliability is consistent with earlier decisions, including the capacity market cases and *South Carolina Public Service Authority*. As the D.C. Circuit put it in *Connecticut DPUC*, "reasonable concerns about system adequacy . . . [are] within the heartland of the Commission's section 206 jurisdiction."<sup>258</sup> FERC may act to adjust regional supply and demand for electricity to ensure that rates are just and reasonable, as long as its actions are not arbitrary and capricious. The capacity market cases, for example, allow FERC to "indirectly incentivize action that it cannot directly require so long as it is otherwise acting within its

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<sup>255</sup> Steven Ferrey, *Sustainable Energy, Environmental Policy, and States' Rights: Discerning the Energy Future Through the Eye of the Dormant Commerce Clause*, 12 N.Y.U. ENVTL. L.J. 507, 631 (2004); Daniel K. Lee & Timothy P. Duane, *Putting the Dormant Commerce Clause Back to Sleep: Adapting the Doctrine to Support State Renewable Portfolio Standards*, 43 ENVTL. L. 295, 310-11 (2013).

<sup>256</sup> *Elec. Power Supply Ass'n*, 136 S. Ct. at 779.

<sup>257</sup> *Id.* at 777:

And in the Rule under review, FERC expanded on that theme. It listed the several ways in which "demand response in organized wholesale energy markets can help improve the functioning and competitiveness of those markets": by replacing high-priced, inefficient generation; exerting "downward pressure" on "generator bidding strategies"; and "support[ing] system reliability."

<sup>258</sup> *Conn. Dept. of Pub. Util. Control v. FERC*, 569 F.3d 477, 482 (D.C. Cir. 2009).

jurisdiction.”<sup>259</sup> That “incentive” can affect an “input into the market-based mechanism”<sup>260</sup> — the “input” in that case being the quantity of energy or capacity traded on the markets. If FERC finds there is not enough supply, for example, it may create incentives to prompt more bidding into the markets.

*FERC v. EPSA* confirms that FERC can provide incentives to adjust the quantity and quality of inputs to markets that it regulates to maintain system reliability, even if that impacts the states. Both demand response programs and capacity markets accomplish this by promoting specific system resources (demand reductions and supply). Critically, FERC can dictate the level of system resources, but cannot directly regulate the states. For example, FERC could not require construction of a specific power plant or condition wholesale sales on a requirement that retail distribution utilities adopt a specific pricing scheme.<sup>261</sup> The ISO-New England ICR acts as an overall constraint on regional power plant construction and reduces states’ flexibility, but does not specify the construction of any individual plant.

In *FERC v. EPSA*, the Court noted that FERC promulgated Order 745 in part because it believed the amount of demand response in wholesale markets was inadequate, which threatens the ability to meet system peak demand.<sup>262</sup> According to the Court, it is therefore up to FERC, not the states, to establish the proper incentives to rectify this situation.<sup>263</sup> To be sure, states could impact FERC’s programs. For example, retail-level demand response programs could impact the wholesale markets: with more state-level demand response, an ISO/RTO could adjust its projections of the amount of capacity needed in a region by the anticipated amount of demand reductions. That is neither prohibited, nor necessarily undesirable. In the interconnected grid, actors will affect each other, and FERC’s plans to meet regional supply and demand will have to adjust to take account of matters that states control.

Now consider the case of the carbon adder. FERC could not simply call it an “environmental” initiative; FERC has limited latitude to directly consider environmental matters in its calculation of whether

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<sup>259</sup> *Elec. Power Supply Ass’n v. FERC*, 753 F.3d 216, 234 (D.C. Cir. 2014) (Edwards, J., dissenting), *rev’d and remanded* *FERC v. Elec. Power Supply Ass’n*, 136 S. Ct. 760 (2016).

<sup>260</sup> *See supra* note 206 and accompanying text.

<sup>261</sup> *Cf. Elec. Power Supply Ass’n*, 753 F.3d at 234 (making a similar argument).

<sup>262</sup> *Elec. Power Supply Ass’n*, 136 S. Ct. at 777.

<sup>263</sup> *Id.*

rates are just and reasonable.<sup>264</sup> Instead, it would need to make findings about its impacts on system adequacy. FERC could re-cast the increase in bid prices as a “reliability adder,” as discussed most recently by Emily Hammond and David Spence. Actions designed to protect system reliability can take a wide variety of forms. To Professors Hammond and Spence, system adequacy “encompasses a suite of attributes (the ability to serve several different grid needs), and no single generation source has all of those attributes.”<sup>265</sup> Thus, FERC could make findings that system adequacy would be imperiled without more electricity from non-fossil sources. FERC may judge, for example, that increased amounts of electricity generated from renewable sources are necessary to hedge against potential outages at fossil-fuel fired plants. Or, perhaps, that shorter lead times of certain renewable power plants would bring them on the system more quickly.

FERC would be within its authority to cast a carbon adder in these terms, because it would find support from both *FERC v. EPSA* and the capacity market cases. FERC would ground a judgment about this issue in terms of regional system adequacy, much as it did in those cases. In this analysis, the “input to the market mechanism” is slightly different: whether there is too much of a specific resource — and not enough of others — on the regional grid. This fits comfortably within a broad view of FERC’s reliability authority.<sup>266</sup>

### 3. FERC Is Regulating Market-Wide Features to Remedy Discrimination Against One Resource in Favor of Another

As *FERC v. EPSA* concluded, “the Commission’s justifications for regulating demand response are all about, and only about, improving the wholesale market.”<sup>267</sup> This is wholly consistent with the numerous previous cases that have confirmed that FERC is best placed to address industry-wide changes, and that as a result, when FERC’s remedies aim globally at the wholesale power system, “agency discretion is . . .

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<sup>264</sup> Hammond & Spence, *supra* note 8, at 198 n.301 (citing Grand Council of the Crees v. FERC, 198 F.3d 950 (D.C. Cir. 2000)).

<sup>265</sup> *Id.* at 42.

<sup>266</sup> *Id.* at 41-42 (noting that FERC’s authority to consider reliability “is far more easily settled than its ability to directly consider environmental factors” and claiming that “a reliability and/or flexibility adder . . . might have better traction, both as a jurisdictional and as a political matter [than a carbon adder]”); cf. JOHN MOORE, THE SUSTAINABLE FERC PROJECT (2013), available at <http://www.ferc.gov/CalendarFiles/20130911144750-Moore%20Comments.pdf> (discussing actions that FERC can take to promote added incorporation of renewables in capacity markets).

<sup>267</sup> *Elec. Power Supply Ass’n*, 136 S. Ct. at 776.

at its zenith.”<sup>268</sup> Oversight of system-wide changes to market terms and conditions is squarely within FERC’s purview. *FERC v. EPSA* and these “zenith” cases show that “practices affecting rates” has evolved from a meaning of practices of individual firms to those that affect the entire market. The “system-wide” limitation is important; the “practice” is the market structure and the remedy is to alleviate a bias against a specific resource. In *New York v. FERC*, for example, the Supreme Court observed “[w]ere FERC to investigate this alleged discrimination [regarding unbundled retail transmission] and make findings concerning undue discrimination,” section 206 “would require FERC to provide a remedy for that discrimination.”<sup>269</sup>

To the Court, then, Order 745 was therefore justified because FERC found that market structures hampered full development of demand response, justified systemic regulation of this “practice affecting rates.” As the Court noted, FERC compiled a lengthy record that existing conditions resulted in inadequate demand response participation.<sup>270</sup> Order 719 was designed to “eliminate barriers to the participation of demand response in the organized power markets by ensuring comparable treatment of resources.”<sup>271</sup> In turn, Order 719 was based on the policy established in the Energy Policy Act of 2005 that, “unnecessary barriers to demand response participation in energy, capacity and ancillary service markets shall be eliminated.”<sup>272</sup> This Congressional policy statement is itself not a jurisdictional limit, but does provide further support for FERC’s action. Then, Order 745 found that policy inadequate, and fixed the level of compensation to remove the barriers to demand response participation.<sup>273</sup>

Now consider the carbon adder. Under this factor, the failure to internalize the environmental externalities in the market as a whole is a “practice affecting rates” if it is justified with specific findings that barriers to participation by renewable resources in wholesale markets prevent those power plants from participating fully in wholesale markets. The fact that electricity generated from other fuels is lower-

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<sup>268</sup> *Niagara Mohawk Power Corp. v. FERC*, 379 F.2d 153, 159 (D.C. Cir. 1967); see *Sacramento Mun. Util. Dist. v. FERC*, 616 F.3d 520, 541 (D.C. Cir. 2010); *La. Pub. Serv. Comm’n v. FERC*, 522 F.3d 378, 393 (D.C. Cir. 2008); *Towns of Concord, Norwood, & Wellesley v. FERC*, 955 F.2d 67, 76 (D.C. Cir. 1992); see also Eisen, *Who Regulates The Smart Grid?*, *supra* note 3, at 93; Wellinghoff & Morenoff, *supra* note 50, at 409 (noting FERC’s “broad remedial authority” in these circumstances).

<sup>269</sup> *New York v. FERC*, 535 U.S. 1, 27 (2002).

<sup>270</sup> *Elec. Power Supply Ass’n*, 136 S. Ct. at 770-72.

<sup>271</sup> Order 719, *supra* note 59, at 64, 107.

<sup>272</sup> Energy Policy Act of 2005, Pub. L. No. 109-58, § 1252(f), 119 Stat. 594, 966.

<sup>273</sup> *Elec. Power Supply Ass’n*, 136 S. Ct. at 771.

cost and therefore clears wholesale markets more readily is not inherently discriminatory. As noted above, since the Progressive Era, rate differentials have been permissible in certain circumstances. For this reason, the barrier cannot simply be that the lower cost of electricity generated from fossil fuel sources does not account for the environmental externalities.<sup>274</sup>

A different sort of finding of discrimination against renewable resources is possible. While a full treatment is beyond the scope of the analysis here, one means of establishing discrimination might involve findings that applying buyer-side mitigation (discussed above in the *New England* case) to electricity generated from renewables “unfairly reduces their capacity value and costs consumers money.”<sup>275</sup> In ISO-New England, for example, the MOPR typically precludes any capacity market bids below minimum price thresholds set by the ISO, unless the ISO grants an exemption. In several recent proceedings, FERC has denied complaints requesting exemptions to the MOPR for renewable energy resources required by state public policies (such as renewable portfolio standards, which require a specific percentage of electricity to be delivered from renewable sources).<sup>276</sup> Were it to conclude otherwise, there might be a foundation for a finding of discrimination.

#### 4. FERC’s Oversight Aims at Conduct that Directly and Significantly Affects Wholesale Rates

The final factor is whether the activity has direct and significant impacts on wholesale rates. Requiring an effect to be proximately connected with rates is central to “directness.” This is consistent with *South Carolina Public Service Authority’s* discussion of the “direct economic relationship” between the regulated practice and wholesale rates, and in harmony with *Prior Notice’s* requirement of filing of documents that involved charges directly relating to rates. It is also consistent with the holdings in the capacity market cases, because there is a direct relationship between capacity requirement on regional systems and the payments in capacity markets. Finally, the

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<sup>274</sup> See Moot, *supra* note 16, at 361.

<sup>275</sup> MOORE, *supra* note 266, at 8. ISO New Eng. Inc. & New Eng. Power Pool Participants Committee, 150 FERC ¶ 61,120 (2015) (discussing the limited exemption from the ISO-New England MOPR).

<sup>276</sup> See, e.g., New Eng. States Comm. on Elec. v. ISO New Eng. Inc., 142 FERC ¶ 61,108 (2013), *order on reh’g*, New Eng. States Comm. on Elec. v. ISO New Eng. Inc., 151 FERC ¶ 61,056 (Apr. 20, 2015). For a discussion of renewable portfolio standards, see JOEL B. EISEN ET AL., ENERGY, ECONOMICS AND THE ENVIRONMENT 758-67 (4th ed. 2015).

requirement of significance provides more certainty: FERC would not have jurisdiction over activities that did not significantly impact market rates (licensing the shoe manufacturing plant, for example).

Both demand response and the carbon adder impact market rates directly and significantly without the actions of an intervening decision maker. As the *FERC v. EPSA* court recognized, in the case of demand response, “it is hard to think of a practice that does so more.”<sup>277</sup> The Court noted that one of demand response’s principal benefits is to serve as a safety valve to lower peak demand and rates.<sup>278</sup> A market operator can bring demand response resources into the markets as needed to bring demand down and reduce spiking wholesale prices.<sup>279</sup>

With respect to the carbon adder, adding an amount to sellers’ bids would fundamentally change the rate structure by altering market bidding. The wholesale markets operate on a “security-constrained, least-cost dispatch’ or ‘security constrained economic dispatch’ (‘SCED’) rule.”<sup>280</sup> The SCED model relies on accepting lowest cost bids subject to concerns about system reliability, taking account of a variety of factors on the system, that is, “recognizing any operational limits of generation and transmission facilities.”<sup>281</sup> The carbon adder would directly change the order in which resources are “dispatched” (come on line) to serve customers, as electricity from some power plants would cost more than it had before. Rates would be directly and significantly impacted, without any intervention by a third party.

### B. *Addressing Potential Preemption of State Laws*

A set of issues related to deciding whether FERC has impermissibly intruded in an area where it has no authority involve whether FERC’s actions preempt state laws impacting wholesale market operations, which is a subject of considerable contention.<sup>282</sup> In a modern

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<sup>277</sup> *Elec. Power Supply Ass’n*, 136 S. Ct. at 775.

<sup>278</sup> *Wellinghoff & Morenoff*, *supra* note 50, at 401.

<sup>279</sup> *Elec. Power Supply Ass’n*, 136 S. Ct. at 775; Eisen, *Who Regulates The Smart Grid?*, *supra* note 3, at 91; Pierce, *Demand Response*, *supra* note 4, at 104.

<sup>280</sup> Hammond & Spence, *supra* note 8, at 155; see also FERC, SECURITY CONSTRAINED ECONOMIC DISPATCH: DEFINITION, PRACTICES, ISSUES AND RECOMMENDATIONS 5 (2006), available at <http://www.ferc.gov/industries/electric/indusact/joint-boards/final-cong-rpt.pdf> [hereinafter SECURITY CONSTRAINED ECONOMIC DISPATCH].

<sup>281</sup> FERC, SECURITY CONSTRAINED ECONOMIC DISPATCH, *supra* note 280, at 10 (citing EPA Act 2005 § 1234).

<sup>282</sup> Emily Hammond, *Energy Law’s Jurisdictional Boundaries: A Call for Course Correction*, GEO. WASH. L. REV. DOCKET (Oct. 2014), <http://www.gwlr.org/oneok-v-learjet/>.

interconnected electricity network, state laws and policies may influence wholesale market rates. The wholesale markets are interconnected to the retail markets, and courts have recognized this relationship numerous times. The relationship to retail markets does not preclude FERC from acting, as FERC's jurisdiction over wholesale market practices holds even when its actions impact retail customers.<sup>283</sup>

The reverse is not true. In the FPA, "Congress meant to draw a bright line easily ascertained, between state and federal jurisdiction. This was done in the [FPA] by making [FERC] jurisdiction plenary and extending it to all wholesale sales in interstate commerce except those which Congress has made explicitly subject to regulation by the States."<sup>284</sup> As a result, states are barred from regulating matters within FERC's exclusive jurisdiction,<sup>285</sup> and the Supreme Court has rejected the proposition that the "scope of [FERC's] jurisdiction . . . is to be determined by a case-by-case analysis of the impact of state regulation upon the national interest."<sup>286</sup> States have no authority over the wholesale markets. They have jurisdiction over retail sales, but the FPA gives them no jurisdiction correlating to that of section 206 that would give them a say over matters directly affecting the wholesale markets, even if those activities relate to retail rates.<sup>287</sup> Therefore, a

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<sup>283</sup> See, e.g., *Fed. Power Comm'n v. Conway Corp.*, 426 U.S. 271, 276-80 (1976) (holding that FERC cannot refuse to consider retail rates in setting just and reasonable wholesale rates). As Justice Scalia recognized in discussing the similar language of section 1(b) of the NGA, FERC may regulate wholesale sales "with an eye toward blunting the sales' anticompetitive effects in the retail market — even though retail prices are controlled by the States." *ONEOK, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1605 (2015) (citing *Conway*, 426 U.S. at 276-80) (Scalia, J., dissenting).

While the *ONEOK* decision rejected FERC's authority over manipulation of the natural gas market and allowed state antitrust laws to govern the traders' conduct, it does not detract from FERC's overall ability to regulate wholesale market operations under the practices affecting rates language. The conduct in *ONEOK* directly involved non-jurisdictional retail markets as well as FERC-jurisdictional wholesale markets, and the state laws "aimed at" general business conduct rather than the markets themselves. Hammond, *supra* note 282.

<sup>284</sup> *FPC v. S. Cal. Edison Co.*, 376 U.S. 205, 215-16 (1964) (internal quotation marks omitted).

<sup>285</sup> *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 308 (1988); *N. Natural Gas Co. v. State Corp. Comm'n*, 372 U.S. 84, 91 (1963) (citation omitted); *Pub. Utils. Comm'n v. FERC*, 900 F.2d 269, 274 n.2 (D.C. Cir. 1990).

<sup>286</sup> *Nantahala Power & Light Co. v. Thornburg*, 476 U.S. 953, 966 (1986) (quoting *S. Cal. Edison Co.*, 376 U.S. at 215) (internal quotation marks omitted).

<sup>287</sup> Brief for Delaware Division of the Public Advocate et al., in Support of Petition for Certiorari at 18-19, *FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760 (2016) (No. 14-840).

state cannot directly regulate the wholesale market, for example, by setting its own capacity market price. Thus, we should think of the standard above as providing regulatory space for FERC to do what it must to make the markets work properly, not simply preventing FERC overreach. If FERC could not oversee mechanisms that form the core of the wholesale markets, it would create the kind of regulatory gap that Congress sought to correct when it adopted the FPA in 1935. This interpretation of the FPA closes the *Attleboro* gap by ensuring that FERC regulates when states cannot.<sup>288</sup> As the Court recognized in *FERC v. EPSA*, to do otherwise would leave certain activities completely unregulated; the FPA was designed expressly to avoid creating such regulatory “vacuums.”<sup>289</sup>

Questions remain, however, whether state laws that have independent justifications but also impact the wholesale markets should stand. Order 745 did not involve preemption, as its opponents took issue with FERC's policy choice, not with its conflict, real or imagined, with any settled state law.<sup>290</sup> In other cases, it has been difficult to summarize modern preemption analysis, and the judicial decisions are murky, but solicitude for state interests has emerged as an important theme — finding a balance between federal and state interests rather than assigning exclusive spheres of regulatory authority.

In recent years, the issue of preemption relating to the electric grid has arisen in several high-profile cases. The conflict with state law has not been found to be express, but implied. The Supreme Court has found preemption implied in several different scenarios.<sup>291</sup> “Field preemption” occurs when Congress, without expressly declaring that state laws are preempted, nevertheless legislates so comprehensively as to occupy the entire field of an issue. A second form of implied preemption is “conflict” preemption, which, under current Supreme Court precedent, occurs either when it is impossible for someone to comply with both state and federal laws, or when the purposes and objectives of federal law would be thwarted by state law.<sup>292</sup> These two scenarios are commonly known as “impossibility” preemption and

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<sup>288</sup> *New York v. FERC*, 535 U.S. 1, 6 (2002).

<sup>289</sup> *Elec. Power Supply Ass'n*, 136 S. Ct. at 780.

<sup>290</sup> Amicus Curiae Brief of Energy Law Scholars in Support of Petitioners at 15-16, *FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760 (2016) (No. 14-840) [hereinafter Amicus Brief of Energy Law Scholars].

<sup>291</sup> Jim Rossi & Thomas Hutton, *Federal Preemption and Clean Energy Floors*, 91 N.C. L. REV. 1285, 1300 (2013) (quoting *La. Pub. Serv. Comm'n v. FCC*, 476 U.S. 355, 368-69 (1986)).

<sup>292</sup> *Id.*

“purposes and objectives” (or “obstacle”) preemption. The analysis of obstacle preemption requires identification of the purposes and objectives of the federal statute, and a determination of the extent to which the state statute stands as an obstacle, if at all, to the accomplishment of these purposes and objectives.<sup>293</sup>

There is a robust body of law on whether implied preemption is constitutional or whether it should be applied in specific cases.<sup>294</sup> The analysis here takes current forms of implied preemption as a given. Consider the type of law involved in the cases the Court has now taken for argument after *FERC v. EPSA*: a state law that grants financial incentives to prompt construction of new electric generating plants.<sup>295</sup> The state’s interests may include promoting development of electricity generation in the state, and a diverse generation mix,<sup>296</sup> among other goals. However, the state’s payment would yield revenue to the power plant developer over and above the amount of capacity market payments, and would therefore conflict with the ISO/RTO’s scheme of providing a specific incentive through capacity payments. Field preemption analysis was central to the decisions in the cases involving these state laws (from New Jersey and Maryland).<sup>297</sup> The Third and Fourth Circuits, respectively, overturned these state laws as

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<sup>293</sup> *Geier v. Am. Honda Motor Co.*, 529 U.S. 861, 873 (2000) (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)).

<sup>294</sup> See, e.g., Steven Gardbaum, *Congress’s Power to Preempt the States*, 33 PEPP. L. REV. 39 (2005); Robert L. Glicksman, *Nothing Is Real: Protecting the Regulatory Void Through Federal Preemption by Inaction*, 26 VA. ENVTL. L.J. 5 (2008); Caleb Nelson, *Preemption*, 86 VA. L. REV. 225 (2000). For an analysis calling for more state control over energy initiatives and less preemption, see Daniel A. Lyons, *Federalism and the Rise of Renewable Energy: Preserving State and Local Voices in the Green Energy Revolution*, 64 CASE W. L. REV. 1619 (2014).

<sup>295</sup> The New Jersey law was An Act Establishing a Long-Term Capacity Agreement Pilot Program to Promote Construction of Qualified Electric Generation Facilities, Amending and Supplementing P.L.1999, c.23, 2011 N.J. Sess. Law Serv. Ch. 9 (West 2016). It established a “contract for differences” (“CFD”) method for providing incentives for new generation. Under the CFD, a winning bidder would be paid (or required to pay) based on the difference between its bid prices for energy and capacity (as reflected in the CFD) and PJM’s corresponding price for capacity. The CFD assured that the winning bidder will always be paid the greater of (1) the PJM price or (2) the bidder’s winning bid price. 2011 N.J. Sess. Law Serv. Ch. 9 §§ 3(b), 3(c)(4) (West 2016).

<sup>296</sup> *Hammond & Spence*, *supra* note 8, at 157 & n.79 (citing statutes from Delaware, Florida, and New York directing state regulators to consider fuel diversity in determining the need for new power plant capacity).

<sup>297</sup> See, e.g., *PPL Energyplus, LLC v. Solomon*, 766 F.3d 241 (3d Cir. 2014), *pet’n for cert. filed* Dec. 10, 2014; *PPL Energyplus, LLC v. Nazarian*, 753 F.3d 467 (4th Cir. 2014), *cert. granted* Oct. 19, 2015.

impermissible intrusions on FERC's authority to set capacity market prices because they distorted wholesale market rates. In these cases, FERC was held to have occupied the entire field of wholesale market regulation. In October 2015, the Supreme Court granted certiorari in the Maryland cases to review these holdings on the preemption issue.<sup>298</sup>

Given *FERC v. EPSA's* discussion of the interconnected nature of the electric grid, in which actors pursue initiatives concurrently, scholars have argued that conflict preemption is more appropriate than field preemption for deciding whether FERC's actions preempt state laws.<sup>299</sup> If FERC's policies for the wholesale market threaten to interfere with historical state authority, the proper way to address this would be in a case-by-case preemption challenge.<sup>300</sup> By contrast, field preemption analysis leaves no role for the states when FERC takes actions involving the wholesale markets. That is incompatible with the central feature of the directness standard discussed in this Part: FERC has expansive — but not unlimited — authority over matters relating to the wholesale markets. When state law does not interfere with FERC's actions, it should stand.

The touchstone for conflict preemption analysis is congressional intent. Unfortunately, this is both indeterminate in most situations, and difficult (if not impossible) to apply here, given the lack of congressional explication on “practices affecting rates” in the enactment of the FPA. Thus, the standard and factors developed above can provide useful insights about the extent of FERC's authority in a given case, and the extent to which state laws conflict with FERC's actions.

Based on the four factors above, a conflict preemption analysis might well reach the same result with respect to the Maryland laws as the Third and Fourth Circuits did using a field preemption analysis. It would be consistent with the central aim of the “directness” standard: confirming the balance between federal and state authority. An interpretation of the FPA that allocates jurisdiction in this setting must manage the uncertainties in going forward in this complex industry landscape, and accommodate the relative interests of FERC and the states. In this interstate context, “effective regulation” no longer requires rigid adherence to the notion of distinct spheres of jurisdiction, but making the dividing line effective. Where specific conflicts do exist, the challenge is to preserve a state regulatory role,

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<sup>298</sup> *Nazarian*, 753 F.3d at 467.

<sup>299</sup> Rossi & Hutton, *supra* note 291, at 1302-03.

<sup>300</sup> Amicus Brief of Energy Law Scholars, *supra* note 290, at 15; Jim Rossi, *Lowering the Filed Tariff Shield: Judicial Enforcement for a Deregulatory Era*, 56 VAND. L. REV. 1591, 1642-46 (2003).

for example, the states' historical mandate to assess whether specific purchases of power by utilities are prudent.<sup>301</sup> That can be an important function of the standard described here. There would still be a robust regulatory role for the states; as the Supreme Court has stated recently, "no one could claim that [this] regulation . . . forecloses every other form of state regulation . . . ."<sup>302</sup>

#### CONCLUSION

The wholesale electricity markets are a work in progress. They are an ongoing experiment primarily aimed at delivering low-cost electricity to consumers — and a recent one at that — that does not capture all values such as internalizing environmental externalities. There is much untapped potential for FERC to act within its current statutory authority to change the structure of these markets. After *FERC v. EPSA*, there are many creative ways that FERC can act, and there are many ways that states can act, some of which would influence the markets.<sup>303</sup> As the Court recognized, demand response participation in wholesale markets is the epitome of this spirit of experimentation, as it seeks to revamp the markets to introduce a wholly new resource (demand reductions).

Widely held views of the FPA's regulatory scheme believe it to be outmoded as the electric power sector continues to evolve. However, this Article concludes that after *FERC v. EPSA*, the New Deal-era FPA, designed to rein in monopolists, has continuing relevance in allocating jurisdiction between states and FERC in a modern market-based context. The historical analysis in this Article does not propose a particular type of experimentation, or a particular suite of actions for FERC to use the wholesale markets to address climate change or stimulate innovation. Nor, for that matter, does it attempt to resolve long-standing policy differences between different levels of government. Instead, it attempts to remove more of the uncertainty about what FERC *can* do, and the limits of a statute that seems a product of a bygone era.

Old statutes, as Jody Freeman and David Spence have cogently argued, can apply to new problems.<sup>304</sup> So it is here. The Court has now found that FERC's authority over ISO/RTOs and their wholesale

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<sup>301</sup> *Nantahala Power & Light Co. v. Thornburg*, 476 U.S. 953, 972 (1986).

<sup>302</sup> *ONEOK, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1600 (2015).

<sup>303</sup> *Hammond & Spence*, *supra* note 8, at 194-95.

<sup>304</sup> Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PA. L. REV. 1 (2014).

markets gives it significant powers to make sweeping changes in the markets. The standard enunciated here, based on well over 100 years of precedent, attempts to lessen the dissonance among levels of government. It outlines FERC's broad authority — broader than some would envision — but also provides limits on that authority to guide policymakers at every level of government.