



# WHOLESALE ELECTRICITY JUSTICE



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## INTRODUCTION

As Winter Storm Uri pummeled the Midwest in February 2021, it brought severe winter weather to many places unaccustomed to such storms. Numerous energy system components failed, notably large quantities of non-weatherized natural gas generation and pipeline infrastructure, ultimately resulting in a devastating, persistent system-wide outage in Texas (Gold 2022). Hundreds of people lost their lives and millions more suffered for days without heat or electricity through record cold temperatures (Aldhous, Lee, and Hirji 2021).

Those with heat and power faced a different challenge: bills that soared into thousands or tens of thousands of dollars for a few days of peak energy, as grid operators struggled to manage surging demand coupled with plummeting supply (Nieto del Rio, Bogel-Burroughs, and Penn 2021).

Even in places where customers were not directly exposed to this price volatility, they will pay for Uri long into the future. For example, Oklahoma Electric and Gas customers will be paying a bill surcharge for the next 28 years to allow their utility to recover the costs of electricity price spikes 1,000 times above normal during the storm (Douglas 2021).

These human consequences result from accredited regulatory decisions regarding the design, monitoring, and eligibility rules for the nation's **wholesale** electricity markets—that is, the complex markets that govern sales between generators and utilities or other electricity providers (which then sell the electricity on to end-use consumers through **retail** sales under rules and terms established by states).

Wholesale electricity and justice are not terms often joined together. The technocratic nature of wholesale electricity regulation does not easily invite discussion or consideration of equity and justice concerns, and it can be difficult to trace the consequences of federal, system-wide decisions to their localized impacts. Yet the example above illustrates just one instance in which decisions made about the wholesale electricity system—from its sources, to its market structure, to its transmission across the grid—had important distributional and social effects.

In some ways, it is a unique example: Texas alone is not under federal jurisdiction when it comes to wholesale electricity regulation (Galbraith 2011). But the challenges laid bare by Winter Storm Uri are far from unique and can be expected to mount as climate disasters of multiple kinds increase in frequency and severity across the United States (GAO 2022).

To its credit, the Federal Energy Regulatory Commission (FERC)—the agency charged with overseeing wholesale electricity markets and transmission in almost the whole country—has embraced a newfound commitment to advancing equity and justice within its work. In 2021, the commission hired a senior counsel for environmental justice and equity, created and began to staff an “Office of Public Participation,” and promised to enhance consideration of equity throughout its work (FERC 2021b, 2021d; Glick 2022). These efforts at FERC reflect a larger commitment within the Biden administration to promoting equity in the administrative state (White House 2021).

With this commitment in place, the question becomes: how can and should FERC advance equity and justice? This question is more easily answered with respect to some parts of FERC's mission than others. As the

country's primary natural gas pipeline regulator, FERC frequently encounters prototypical environmental justice considerations when approving and siting pipelines through particular locales.<sup>1</sup>

However, it is far less clear how justice and equity figure into the electricity side of FERC's work, where its modern focus is on creating robust, well-functioning markets and comprehensive transmission planning. Even FERC itself seems to struggle to draw the connections: in its "Equity Action Plan" released in April 2022, the agency establishes five focus areas for its equity work—none of which directly relates to electricity markets or transmission (FERC 2022b).<sup>2</sup>

This policy brief explores several non-obvious but critical ways that justice and equity concerns are implicated in wholesale electricity and transmission policy. In doing so, it aims to assist both regulators and stakeholders in more explicitly raising and ventilating these considerations in pressing policy conversations underway regarding wholesale electricity in the United States.

## ENVIRONMENTAL AND ENERGY JUSTICE

The environmental justice movement's roots are often traced to a vibrant 1982 community uprising in Warren County, North Carolina against the siting of a hazardous waste landfill in a predominantly African American county (Bullard 2001). Since that time, a decades-long struggle has generated ever more widespread acceptance that the government should strive to ensure, in the words of the Environmental Protection Agency (EPA), "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (EPA 2014).

The concept of environmental justice is frequently described as having both substantive and procedural dimensions, the former focusing on lived outcomes of policy choices (e.g., whether a community suffers undue concentrations of polluting industries) and the latter focusing on the fairness and inclusiveness of the forums in which those policies were decided (e.g., whether meaningful opportunities for public input were provided at appropriate points in the decision-making process) (Kuehn 2000).

Energy justice is a newer concept in popular and academic discourse. Energy justice considers how the costs and benefits of energy systems are distributed and what processes exist to reveal and reduce injustices in these systems (Jenkins et al. 2016). Energy justice considerations vis-à-vis the electricity system include the unequally distributed hardships that households face in heating and electrifying their homes and paying their bills, as well as the consequences on particular communities from choices made regarding sources of electricity (e.g., those living in communities where coal is mined, natural gas is fracked, or energy is generated from fossil fuels).

Energy-justice-focused researchers and organizations have made important inroads in strategies to reduce households' direct energy burdens, including programs to promote weatherization and energy efficiency in low-income communities and communities of color and to expand access to clean energy technologies (Reames 2016; Luke 2020; Energy Coordinating Agency n.d.) However, energy justice discourse and practice are much thinner in wholesale electricity policy, rather than retail-level programming.<sup>3</sup>

<sup>1</sup> In February 2022, FERC undertook a major revision of its policies governing pipeline siting, issuing updates that would better integrate consideration of environmental justice and climate change impacts. These changes were met with such vociferous opposition that FERC quickly pulled back from them, converting them into proposals and soliciting additional comments (FERC 2022a). These pipeline-related initiatives have important environmental justice implications, not least because many pipelines have been sited through environmental justice communities. However, this policy brief sets aside pipeline-related justice considerations as both conceptually easier and more widely appreciated than wholesale electricity-related challenges.

<sup>2</sup> The five focus areas are "(1) Office of Public Participation, (2) Tribal government consultation and engagement; (3) siting and certification of natural gas infrastructure; (4) hydropower project licensing processes; and (5) FERC staff equity readiness" (FERC 2022b).

<sup>3</sup> As one example of this dearth of discussion in wholesale-level policy, consider that in a recent proposed rule on updating transmission planning to maintain just and reasonable prices and respond to the changing energy mix, FERC did not once mention energy or environmental justice in its 475-page proposal (FERC 2022c).



## FERC'S ROLE IN THE ELECTRICITY SYSTEM

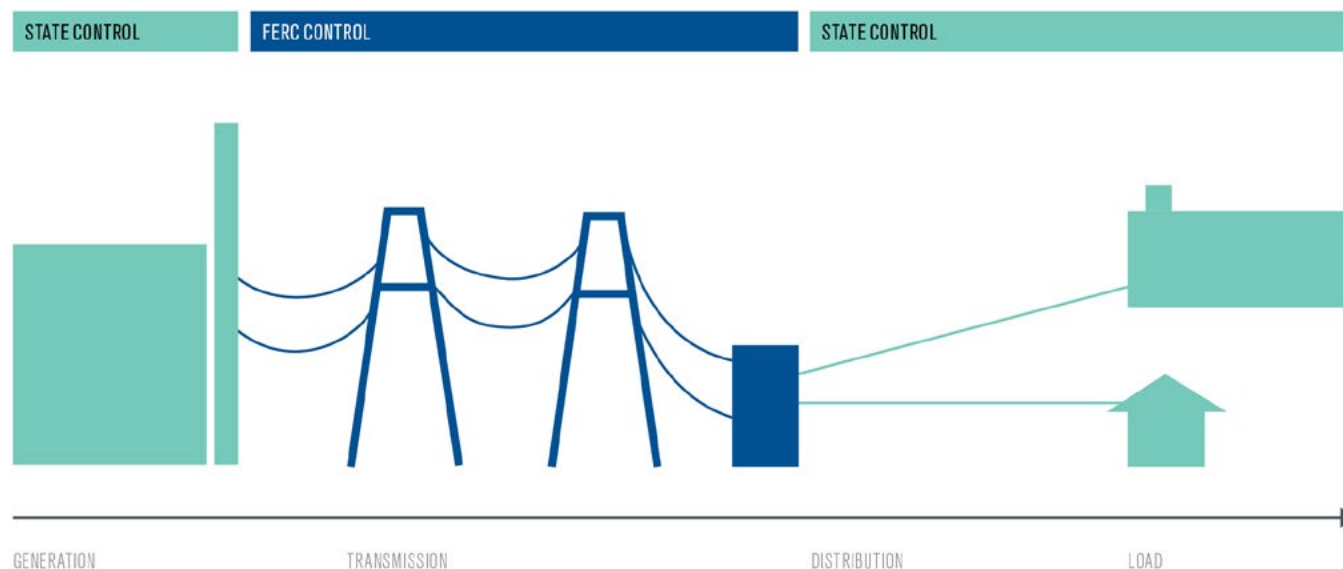
For nearly a century, responsibility for governing the electricity system has been divided between FERC and the states. Under the Federal Power Act of 1935, states are given control over electricity generation and the distribution of electricity from utilities to end-use consumers (16 U.S.C. § 824) (see Figure 1). That means that many quintessential issues of energy and environmental justice are largely matters of state, not federal, policy.

For example, states have the most direct control over disparate “energy burdens” faced by consumers,<sup>4</sup> utility disconnection policies, electricity rate design, and the disproportionate impacts of siting dirty electricity generation facilities in low-income communities and communities of color (Klass and Chan forthcoming 2022; Farley et al. 2021). States also control the siting of electric transmission lines and oil pipelines (Klass and Wilson 2012; Klass and Meinhardt 2015).

FERC, by contrast, is in charge of the “middle” of the system—the transmission lines and electricity markets that connect generators to utilities (see Figure 1). In more technical terms, FERC controls both interstate electricity transmission and interstate wholesale sales of electricity (16 U.S.C. § 824). In most parts of the country, wholesale sales now occur through a series of regional markets for electricity and related products.

Thus, in today’s system, FERC’s main jobs include overseeing regional electricity market rules regarding eligibility and price formation; monitoring the planning, funding, and pricing of electricity transmission; and ensuring the bulk power system’s reliability by approving standards to help make sure the system functions through storms and other disasters (Klass et al. forthcoming 2022).<sup>5</sup>

FIGURE 1: FERC AND STATE ROLES IN THE ELECTRICITY SYSTEM



<sup>4</sup> “Energy burden” refers to the percentage of household income spent on energy. See *infra* Figure 2.

<sup>5</sup> In contrast, the *distribution grid*—the collection of smaller poles and wires that connect the bulk system to individual homes—is overseen by states under the division mapped above, meaning that state policies control outages that occur at the local level from events such as downed tree limbs.

## BRINGING JUSTICE TO WHOLESALE REGULATION

FERC's position in the energy system—in charge of the wholesale, interstate portions of the grid—gives it a role that is both consequential and opaque. Everyday consumers rarely link bill increases to FERC's actions, since their experience of the wholesale system is intermediated by their local utility and, at one level of removal, their state public utility commission.

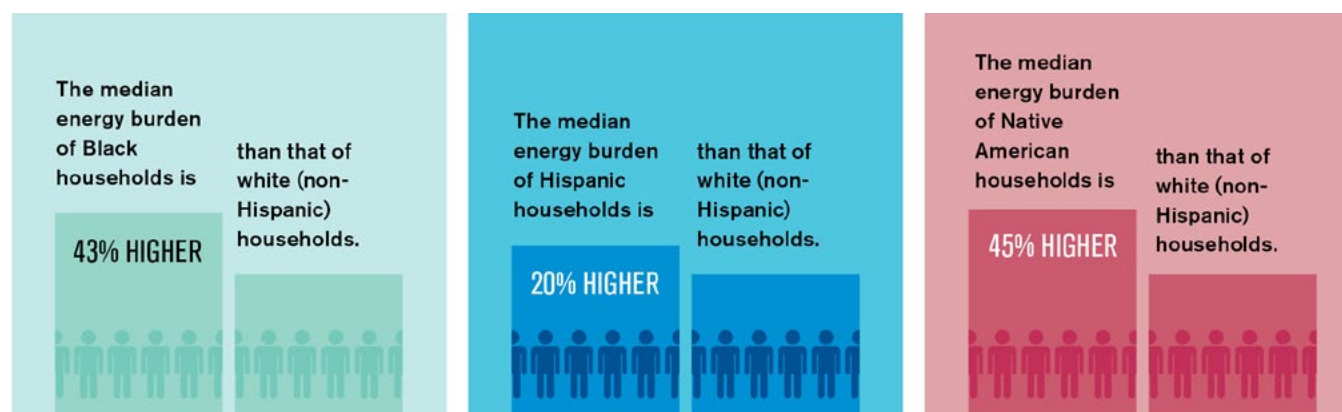
Similarly, for those consumers passionate about clean energy, state policy is also key because the Federal Power Act gives states primary control over electricity generation. Nevertheless, around **sixty-nine percent** of the average American's electricity bill comes from elements of the system over which FERC has some control (outside of Texas): wholesale electricity costs make up 56% of bills and transmission costs another 13% (EIA 2020).

Clearly, choices made about this part of the system have reverberating consequences for consumers' lives and wellbeing. And in a country where 20% of households

struggled to pay their energy bill in the last year, and 28% skipped a basic expense such as food or medicine to pay their bill, these choices also have deeply unequal consequences across class and race (see Figure 2) (Reinicke 2021). Compounding these effects are the increasingly severe ravages of climate change, which also disproportionately impact low-income communities and communities of color, who in turn have fewer resources to cope with the power and water outages and damage that these disasters often bring (Welton forthcoming 2022; Verchick 2012).

FERC's guiding charge in governing wholesale electricity markets and transmission is to ensure “just and reasonable” rates and practices (16 U.S.C. § 824d). This standard establishes justice as a touchstone of FERC's mission for the electricity system, and it has been interpreted as providing the agency some flexibility within which to maneuver.<sup>6</sup> How, then, might the commission work to integrate long-sidelined equity and justice considerations into its electricity governance? This policy brief offers six suggestions, highlighting how several ongoing debates in FERC electricity policy have under-discussed justice and equity dimensions.

FIGURE 2: ENERGY BURDENS ACROSS RACE AND ETHNICITY



Source: ACEEE 2022.

<sup>6</sup> This flexibility is captured in a D.C. Circuit opinion that explains that the “just and reasonable” standard “is, of course, not very precise” and does not “unduly confine FERC’s ratemaking authority,” because “the words themselves have no intrinsic meaning applicable alike to all situations.” *Farmers Union Cent. Exch. v. Fed. Energy Reg. Comm’n*, 734 F.2d 1486, 1501 (D.C. Cir. 1984) (citations omitted).

## POLICY RECOMMENDATIONS

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### EMBED EQUITY AS AN ANALYTICAL TOOL

FERC orders are notoriously long and dense, filled with careful expositions of comments and responses. Yet one would be hard-pressed to find a transparent analysis within most orders of the equity implications of the decision.

To facilitate open discussion of the role of equity in wholesale electricity and transmission, FERC should adopt a consistent, robust analytical process for assessing the equity implications of particular orders—including estimating bill impacts across consumer classes and regions and any other relevant environmental and energy justice implications, and reporting on the levels and methods of participation for various types of intervenors in the proceeding.

It is no longer enough to evaluate whether an order's benefits outweigh its costs or to consider cost distribution merely as it pertains to producers versus consumers. It is the distribution of costs and benefits across the populace that matters from an equity perspective.

### ENHANCE ENVIRONMENTAL JUSTICE VOICES

As FERC worked to create its new “Office of Public Participation” (OPP), it held a series of listening sessions that revealed how frustrated many felt with the avenues and processes for public participation at the agency (FERC 2021d).

One might contrast this level of access with that of industry associations—repeat FERC advocates whose member utilities have historically been able to rate base (i.e., spread among consumers) their costs of membership, estimated to be at least around \$100 million per year (E9 Insight 2022). Commendably, FERC is re-examining the issue of industry association

spending recoverability and might make important procedural justice gains should it adopt new limitations on such spending (FERC 2021c).

But reforms should not stop there: the OPP has a critical role to play in bringing new voices to FERC conversations and in helping ease the burdens of non-industry participation in complex FERC proceedings. Equity considerations demand that the office focus its attention on empowering underrepresented, disadvantaged communities to participate effectively as it rolls out its public engagement plans in coming months and years.<sup>7</sup>

### LEVEL THE RESOURCE PLAYING FIELD

FERC describes itself as a “resource-neutral” agency, meaning that it aims to treat all resources non-discriminatorily in the design of wholesale electricity markets and grid interconnection requirements (FERC 2018a). Yet many legacy rules and policies, designed with more traditional resources in mind, end up discriminating against new technologies such as energy storage and renewable resources (Welton 2021).

This discrimination has at least three unjust effects. First, it raises prices in the wholesale markets by narrowing the range of eligible resources and thus increasing the market “clearing” price—which is ultimately reflected in higher end-use consumer rates (Goggin & Gramlich 2020). Second, such discrimination perpetuates the use of legacy resources, including dirty “peaker” plants and diesel-fired generators, with disproportionate air quality harms to the disadvantaged communities most likely to host this infrastructure.<sup>8</sup> And third, it limits the burgeoning efforts of energy democracy advocates to site and support community-owned small-scale resources in disadvantaged communities by constricting these resources’ potential revenue streams (Energy Democracy Project 2020).

<sup>7</sup> Interim Guidance on the implementation of the Biden Administration’s equity goals defines “disadvantaged communities” through a list of thirteen relevant criteria (Young et al. 2021).

<sup>8</sup> The Department of Energy commendably has initiatives underway to support energy storage projects in disadvantaged communities on precisely this rationale. As one recent article explains: “From a system-wide perspective, if energy storage – depending on when it’s deployed – can offset the need for fossil fuel generators, it could reduce the need to run those facilities or retire them altogether” (Utility Dive 2022).

Thus, for reasons of equity (in addition to many others), FERC should accelerate its efforts to require *speedy* and *effective* changes in regional policies and practices that continue to stand as impediments to emerging clean energy resources' full grid participation.

## RIGHT-SIZE TRANSMISSION BUILDOUT

There is widespread agreement that the imperative move to clean energy will require a significant expansion of U.S. transmission infrastructure. For more than two decades, FERC has been working to rationalize how this infrastructure is planned, developed, and shared. Although the agency has made headway, considerable work remains to be done (FERC 2021a).

There are substantial equity implications to how FERC proceeds with this work: grid planning that is more inter-regional and collaborative will best facilitate a clean energy transition (with attendant air quality and climate benefits), ensure a least-cost transition, and require less infrastructure investment—of which disadvantaged communities have often borne the brunt.

As FERC finalizes pending proposed transmission planning reforms (FERC 2022c) and considers others, equity considerations counsel for the agency to be bold in requiring arrangements that maximize the shared potential of a national grid, even over the objection of powerful incumbents and states intent on stymieing the clean energy progress of their neighbors.

## RECOGNIZE 'MARKETS' AS CONSTRUCTED

"Markets" in electricity are thoroughly regulatory constructs, with detailed rules guiding nearly every facet of their design, administration, and oversight (Boyd 2015, 1670). Such prescriptive governance is imperative for a good as important as electricity, which requires second-by-second balancing of the entire system to maintain reliable power.

But it also means that careful attention must be paid to who writes these rules, given their centrality to the system's functioning. The current structure for creating transmission plans and market rules is far from equitable: these rules are typically crafted in the first instance by

"regional transmission organizations" (RTOs)—private clubs comprised of industry incumbents—who "vote" on what the system's rules should be, often in ways that redound to their benefit (Welton 2021).

This same challenge plagues emerging forms of governance in non-RTO regions. FERC recently approved a governance arrangement for the Southeast over the objection of one commissioner, who views the nominal "Southeastern Energy Exchange Market" as more like a cabal of transmission owners that have "[joined] together as a member group to render transmission service to each other on preferential terms" (Clements 2022).

From a justice perspective, approval of this new governance arrangement is particularly troubling, as it both (1) excludes potential new clean energy competitors from the system, thereby missing opportunities to lower energy burdens and improve air quality in a largely impoverished region; and (2) creates even less of a forum for consumer and public interest participation than those processes available in RTOs.

These challenges imply that it may not be enough for FERC simply to continue working to "level the playing field" rule-by-rule, resource-by-resource. Instead, achieving procedural and substantive justice in these markets may require a deeper re-examination of the structure of regional electricity governance to give consumers, advocates, and states more sway in writing the rules that shape the system.

## UPDATE RELIABILITY AND RESILIENCE DISCUSSIONS

In recent years, fossil fuel generators losing out to renewables on cost competitiveness have turned to a different tactic to justify their essentiality: grid reliability (Trabish 2017). FERC has at times succumbed to these arguments and at times rejected them (FERC 2018a, 2018b).

Recent events have clearly put the lie to the idea that fossil fuel generators are inherently more reliable—for example, system failures related to natural gas generation turned out to be the biggest contributor to Texas's 2021 blackout (Magness 2021). Ensuring

grid reliability today requires something different than fossil fuel availability—it requires systemic flexibility to help balance out an increasing proportion of variable resources (NERC 2020).

Conversations around grid reliability and resiliency have deep equity stakes: disadvantaged communities often have less ability to withstand and recover from prolonged outages (Welton forthcoming 2022), yet entrenching fossil fuels and their related health and climate consequences would only worsen the vulnerability of these communities. Accordingly, an equity-forward FERC should prioritize updating industry understandings and practices of what kinds of resources best contribute to a “reliable” and “resilient” grid in its oversight of both market design and reliability standard-setting.

## CONCLUSION

FERC has recently begun to take a more consumer-oriented view of its role in creating a “just and reasonable” electricity grid (Howland 2022). This reorientation is an admirable first step toward enhancing the agency’s consideration of equity in its electricity work.

However, true equity demands more: the agency’s next steps should focus more on how certain communities are disparately disadvantaged by current wholesale electricity policy and governance practices, and how the agency’s long-standing mandate to pursue just rates might provide a springboard for addressing these disparities.

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