Powering America: Consumer-Oriented Perspectives on Improving the Nation’s Electricity Markets

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About Public Citizen

Public Citizen is a national nonprofit organization founded in 1971 with more than 400,000 members and supporters across the United States. We represent consumer interests through lobbying, litigation, administrative advocacy, research, and public education on a broad range of issues including affordable and sustainable energy markets, climate change, consumer rights in the marketplace, product safety, financial regulation, worker safety, safe and affordable health care, campaign finance reform and government ethics, fair trade, and corporate and government accountability. Detail on our work and accomplishments, including financials that we report to the Internal Revenue Service, is found at citizen.org.

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Introduction

America’s electricity markets are in the midst of a remarkable and profound transition driven by innovations in the production, transmission and consumption of power. The three key factors triggering these advances are the proliferation of inexpensive renewable energy and the rise of energy storage; flat-lining demand since 2007 due to energy efficiency, smart technologies and other developments; and cheaper natural gas. These combined forces are rendering older nuclear and coal-fueled power plants uneconomic. It is important to note that, contrary to pronouncements by members of the Trump Administration, these developments do not harm consumers or reliability/resilience. In fact they lower costs and boost resilience, in no small part by curbing greenhouse gas pollution from the power sector.

For the most part, this revolution is the result of factors far outside the complex and ever-changing rules implemented by the Federal Energy Regulatory Commission and the various private Regional Transmission Organizations. The significant growth of renewables has less to do with RTO tariffs and more to do with three initiatives: twenty years of state renewable mandates\(^1\); corporate procurement of utility-scale renewable development\(^2\); and retail-level distributed generation incentives. These three influences provided the platform for renewable energy gaining a market foothold, and now utility-scale wind and solar are often the cheaper option in many utilities’ integrated resource plans.\(^3\)

To be clear: consumers benefit from a transition to greater utility-scale renewable generation when that resource is low-cost and when those low costs are reflected in retail rates. The triple-threat to consumers is political efforts by owners of mismanaged and uneconomic generation seeking subsidies; Regional Transmission Organizations constructed to serve transmission and generator interests at the expense of the public interest; and a FERC that fails to uphold just and reasonable rate design, oversight and enforcement.

Public Citizen offers three proposals to protect consumers going forward. First, any federal or state efforts to force consumers to pay for uneconomic baseload generation cannot be

\(^3\) It is important to note that utility-scale renewable resources are referenced here. While cost declines for rooftop solar have been significant and impressive, such resources are not yet cost-competitive with most incumbent generation.
considered just and reasonable. Second, Regional Transmission Organizations have proven to be unresponsive to the needs of the public interest, and therefore fundamental reforms to their governance—including separating the RTO functions of bulk power market management and their administration of stakeholder processes where tariffs and market rules are developed—must be considered. Third, FERC must create and fund the Office of Public Participation to provide intervenor compensation in order to improve public interest participation in FERC actions.

I. Disruptive Challenges Send Economic Losers Scrambling for Political Interference

History is punctuated by social and economic change triggered by technological innovation and deployment. Incumbent industries with accumulated financial and political resources gained from years of market dominance that are suddenly challenged by disruptive advancements typically respond not by innovating but rather by employing political institutions under their influence to stymie new entrants in an effort to prolong their control of market share.

Trump Administration officials—who have aggressively pushed a false narrative that the retirements of uneconomic nuclear and coal baseload units present reliability and resiliency risks—appear to understand this better than most, as the Department of Energy leapt into the fray with a remarkable, unprecedented and radical wholesale power market rewrite that would force consumers to bail out dozens of uneconomic nuclear and coal power plants at a cost of billions of dollars.4

Even more shocking than the Department of Energy’s proposal is FERC’s response to fast-track its consideration,5 with its order giving the public only 21 days to provide initial comments on the DOE rulemaking.

In a June 2017 filing, Public Citizen raised explicit concerns about the Trump Administration interfering with the historical independence of FERC to force the Commission to accept massive ratepayer funded subsidies for uneconomic nuclear and coal generation: “we have concerns that the Trump Administration’s designation of the Chairmanship will be tied to the Administration’s prioritization of wholesale power market design to subsidize uneconomic nuclear, coal and natural gas generation.”6

Congress must send a clear message to FERC that 21 days to consider such a fundamental change in power markets is completely insufficient, and that Commission must grant at least 60 days for the public to review and consider the proposal.

That said, the proposal would alter existing RTO tariffs. But under Section 206 of the Federal Power Act, existing rates and tariffs cannot be changed unless FERC finds that the existing RTO market tariff is unjust and unreasonable, or unduly discriminatory or preferential. The DOE proposal has made no effort to document or prove that current RTO markets are unjust and unreasonable, and the structure of their proposal—establishing arbitrary on-site fuel supply requirements—appear to be both discriminatory and preferential.

DOEs proposal demands “immediate action” to address the “crisis at hand” and that the “loss of fuel-secure generation must be stopped.” This reads more like a President Trump Tweet than a reasoned, serious policy proposal, as there is absolutely no crisis whatsoever regarding the retirements of uneconomic baseload nuclear and coal power plants. The owners of these plants may consider it a crisis that they’re not making the money they promised to their shareholders, but that is of no concern to consumers or to FERC’s mandate that rates be just and reasonable.

Indeed, the CEO of the North American Electric Reliability Corporation (NERC) told Congress in September that “[e]ven with all the changes underway, the bulk power system (BPS) remains highly reliable and resilient, showing improved reliable performance year over year.”7 Furthermore, the NERCs State of Reliability 2017 identified no “crisis” of reliability or resiliency from expected nuclear and coal baseload retirements.8

The U.S. Department of Energy’s own August 2017 Staff Report concludes that “... BPS [Bulk Power System] reliability is adequate despite the retirement of a portion of baseload capacity and unique regional hurdles posed by the changing resource mix.”9 There is no crisis requiring emergency FERC action.

A Rhodium Group analysis of form OE-417 reports, filed with the U.S. Department of Energy by any utility that experiences a major disturbance in electricity delivery, shows that from 2012-16, fuel supply emergencies were the cause of only 0.00007% of the total

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number of hours disturbed. As the Group determines, the DOE rulemaking proposal is a solution in search of a problem.\textsuperscript{10}

The DOE rulemaking request argues that wholesale power markets are not adequately pricing the “resiliency attributes” of “fuel secure” generation. DOE then proposes to guarantee full cost-recovery for units that can demonstrate a 90-day on-site fuel supply, as the DOE claims that the continued operation of such units is essential for grid resilience. Conveniently for the nuclear and coal industries, only their units would qualify for such bailouts. Coal-fired power plants typically have such on-site reserves of coal piled next to their generation units, and nuclear power plants have onsite nuclear fuel to meet the standard.

Recent events contradict this arbitrary standard. Hurricane Harvey, which made landfall on coastal Texas in August 2017, dumped so much rain that “[t]he external coal pile at [NRG’s] W.A. Parish became so saturated with rainwater that coal was unable to be delivered into the silos from the conveyer system. In response to that situation, we transferred W.A. Parish Unit 5 and Unit 6 to natural gas rather than coal as the fuel source. These units haven’t used natural gas for operational purposes since 2009.”\textsuperscript{11} Having a 90-day on-site fuel source is therefore not an adequate measure of reliability or resilience.

Nuclear power and its on-site fuel supplies fare even worse during major storm events. Before Hurricane Irma even made landfall in Florida on September 10, 2017, both of the state’s nuclear power plants—Turkey Point and St. Lucie—were forced into unscheduled outages. And the U.S. Energy Information Administration noted that the state’s rapid recovery from Irma was due not to the presence of nuclear power plants, but rather due to investments made in smart grid technology and replacing wooden poles with concrete.\textsuperscript{12} This same EIA analysis attributes these upgrades with the significantly improved recovery in Florida from 2017’s Irma compared to 2005’s Wilma—and it is important to note that in 2005 nuclear power generated 13.1% of the state’s power, compared to 11.8% in 2015. As Florida became less reliant on nuclear power, it recovered post-hurricane faster.

It is of concern that the DOE is focusing on the reliability and resiliency attributes of individual classes of generation units instead of the system as a whole. Indeed, the Rocky Mountain Institute notes that evolving power markets do not require baseload, and the


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group posits that reliability is a system attribute, and not a unit attribute requiring baseload.\textsuperscript{13}

That said, studies now show that replacing older baseload generation with renewables, efficiency and other distributed generation resources provides greater reliability and resilience at lower costs.\textsuperscript{14}

Earlier this year, the U.S. Energy Information Administration noted that 2016 experienced the largest net increase in generation capacity since 2011. That means baseload retirements are being more than offset by new renewable and natural gas capacity additions.\textsuperscript{15} There is no crisis requiring emergency FERC action.

When faced with market adversity, companies must innovate, optimize efficiencies, or declare bankruptcy. It is not the job of the consumer to open their bank account to pay for energy executive’s inability to manage risk—in fact, FERC’s entire market-based rate experiment is premised on freeing consumers from being on the hook for companies’ failure to innovate. FERC’s market-based rate experiment was a compact with consumers: corporations would be allowed to charge higher rates based upon whatever the market would bear in exchange for exposing companies and shareholders to risk. The nuclear and coal industry push to bail out their generation investments looks like they don’t have much appetite for that risk part—and I’m here to tell you that neither do household consumers.

Consumer-funded bailouts of merchant generation are particularly egregious when one evaluates the poor executive management that contributed to the uneconomic performance of certain coal and natural gas generation. Both publically-traded and private equity power plant owners have engaged in aggressive, highly-leveraged strategies to acquire large fleets of coal and natural gas generation units that have rendered the companies unable to respond to increased competition. For example, \textit{The Wall Street Journal} reported that one Independent Power Producer, Dynegy (a company under active investigation for market manipulation\textsuperscript{16}), is saddled with $9 billion in debt “which has become a burden” on the company’s ability to adjust to competitive wholesale markets.\textsuperscript{17}


\textsuperscript{14} The Importance of Distribution-Scale Solar for Grid Resilience, Rocky Mountain Institute, September 22, 2017, https://rmi.org/news/importance-distribution-scale-solar-grid-resilience/

\textsuperscript{15} U.S. electric generating capacity increase in 2016 was largest net change since 2011, February 27, 2017, www.eia.gov/todayinenergy/detail.php?id=30112

\textsuperscript{16} FERC Docket No. IN15-10

Other large IPPs are also highly leveraged: both NRG and AES are carrying $20 billion apiece in debt, while Calpine bears $13.5 billion. FERC should not be re-writing market rules to bail out highly-leveraged, poorly run power companies. Generators need to live within their means, and learn how to compete with more nimble competition.

But it’s the utilities like Exelon and Dominion with nuclear power plants seeking handouts that is truly outrageous. In every instance involving every merchant nuclear power plant, ratepayers already paid for these power facilities. All merchant nuclear power facilities in the United States were built and paid for under cost-of-service regulation. When some states restructured the electric industry in the mid- and late-1990s, many utilities with nuclear units sold them either to other companies or to affiliates at below-market prices. In every instance, the state restructuring required consumers to pay the difference between the sales price and the remaining cost-of-service debt still on the utility’s books, known as the stranded costs.

Newly divested nuclear units quickly were able to earn huge profits from the onset of state restructuring until the fracking boom began in 2008-09. Pre-fracking, natural gas prices were volatile, expensive and set the marginal price in RTO markets. Nuclear units at the time had lower costs than the gas-set high marginal price, and were, in the words of Halliburton’s CEO, “printing money like crazy.” Indeed, in just one example, then-Connecticut Attorney General Richard Blumenthal estimated that Dominion’s two merchant nuclear power plants in the state had earned an annual profit margin of 44% and 53%, respectively. Exelon or Dominion were not demanding to redesign wholesale power market rules when the companies were earning windfall profits on the same facilities that now are struggling against cheaper competition.

Public Citizen made this case when we opposed New York’s absurd bailout of the state’s upstate nuclear power plants:

…the biggest transition [in utility restructuring] was the assumption of risk: in the old, vertically-integrated model, electric utilities were franchised monopolies that had their profits tightly-regulated. This eliminated the ability to earn windfall profits, but it also jettisoned shareholder risk, which is why utilities were known for decades as safe, predictable investments for “widows and orphans.” To be sure, inefficiencies abounded under this monopoly system particularly if state regulators did a poor job controlling costs or making poor long-term strategic decisions [see, for example Kemper and Vogtle]. But ratepayers were guaranteed electric rates directly tied to the cost of producing and delivering it, and utility shareholders were guaranteed a risk-averse investment. And, importantly, reliability was

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ensured under the old vertically-integrated model because the utilities had a legal obligation to serve their customers...[state restructuring replaced] the legal obligation to serve with a market-based, incentive approach to ensuring reliability. Power sellers were, for the first time, offered an opportunity to earn windfall profits, and in exchange they were supposed to invest those record earnings into new capacity investments in order to continue to earn long-term profits. Reliability would be incentivized with the lure of more profits to those that invested...It is, to put it mildly, an outrage to have allowed these companies to earn unregulated profits for years when market conditions were conducive for it, and then redesign the rules when market conditions change and transfer risk away from shareholders of the power plant owners and onto...captive...ratepayers.”

The point of this history lesson is not to wax poetic about the good old days cost-of-service regulation, but rather to point out just how shameful it is for “market” advocates and self-interested companies to push FERC for billions of dollars in bailouts after earning such handsome unregulated profits for so many years. It is not just and reasonable to allow unregulated profits when market conditions are conducive for it, and then force ratepayers to fund expensive “market fixes” to shoulder these same companies’ risks.

II. The RTOs Are Political Entities Designed to Serve Entrenched Economic Interests

When FERC embarked on its administrative experiment in competitive markets in the 1990s by authorizing entities to charge market-based rates (rather than the cost-of-service rate that had prevailed for a century), the Commission quickly realized that it needed additional structures to assist in price formation and operations. In December 1999, FERC issued Order 2000 which called for the voluntary creation of Regional Transmission Organizations. RTOs are not a creation of Congress but rather fashioned administratively by FERC, which is the primary reason they are voluntary organizations. Since Order 2000, FERC has granted sweeping Federal Power Act authorities to the five RTOs under its jurisdiction, including the management of their “stakeholder” process where market rules and tariffs are developed. The RTOs have evolved into political organizations significantly influenced by the incumbent generators and transmission owners.

One fascinating example involves the about-face PJM performed in the wake of the 2014 Polar Vortex. On May 15, 2014—shortly after the reliability disruptions of the Polar Vortex—PJM wrote to FERC:

PJM is meeting reliability objectives by developing the resource portfolio mix that results from government policy directives at the state and federal level as well as the economics of competing resource options. The Commission’s support of PJM’s capacity market construct and the various recent reforms submitted by PJM have served as a valuable tool that enables PJM to specifically identify the resources available to meet future demand over the next three-year period.\textsuperscript{20}

Later that year, the capacity auction saw disappointing financial returns for nuclear generators like Exelon. An executive with the company did an interview with its trade association the Nuclear Energy Institute on June 12, 2014, where the company complained that PJM’s capacity market wasn’t making the company enough money, and that major changes were needed.\textsuperscript{21}

All of a sudden, just one year after PJM boasted how its capacity market design was “meeting reliability objectives,”—and after loud protests by one of PJMs most powerful members, Exelon—PJM entertained FERC with a completely different story in 2015:

\[ \text{[the PJM capacity market, or Reliability Pricing Model] RPM’s current capacity market performance incentives and requirements are weak, and therefore require immediate reform...[if PJM’s requested capacity market reforms are not adopted] it would mean that the PJM Region would let five more winters pass after 2014 without implementing a full remedy to the manifestly deficient performance requirements in the current rules.}\textsuperscript{22}

How on earth did PJM whipsaw from boasting in 2014 how fantastic its capacity market was working to ensure reliability, to just one year later describing them as weak? Because PJM, like the other RTOs, are highly susceptible to the corrosive self-interest of its powerful utility and generator members at the expense of the public interest and consumers.

While obviously the DOE Grid Resiliency Pricing Rule has grabbed the headlines, less attention has been paid to the fact that multiple RTOs are already at an advanced stage of proposing their own versions of the DOE rulemaking, again at the behest of powerful corporate RTO members. PJM was first out the gate with its memo advocating wholesale market changes echoing Perry’s flawed assumptions. On June 15, 2017, PJM management produced a report, \textit{Energy Price Formation and Valuing Flexibility} that advocates for “fundamental” changes in “price formation”, including “Refining locational marginal price

(LMP) formation to recognize the contribution of all resources, including large, inflexible units (often referred to as “baseload” resources)” and to address “the pernicious effect” cheap and efficient renewable energy “may have in hastening the premature retirement of economic thermal generation, whose continuing operation is needed to meet capacity requirements and provide reliability services to accommodate for the intermittency of renewable generation.”23 PJM offers no data or proof to support this radical premise that consumers need to bail out inefficient generation to ensure reliability. But such a proposal is exactly in line with Exelon’s demands to bail out its uneconomic nuclear power plants.

Imagine an alternative reality in which the discussion was: Gosh, Steve Jobs and Bill Gates and their newfangled computers have the “pernicious effect...in hastening the premature retirement of economic” typewriter manufacturing.

PJM, like the other RTOs, preside over a vast and highly complex “stakeholder” process. PJM’s stakeholder process has at least 47 different Committees, Subcommittees and Task Forces where market reforms are proposed, debated, and voted upon for ultimate submission to PJM’s Board to then send to the Commission for approval into regulation and law. Each year, there are hundreds of such meetings that require significant financial and human resources to meaningfully participate.

One of PJM’s newer stakeholder groups is the Capacity Construct/Public Policy Senior Task Force, which PJM helpfully refers to as CCPPSTF.24 One can peruse historical meeting minutes of this stakeholder group, which provide cursory information about what transpired in these electricity policy planning incubators. One detail that can be reviewed are the list of names and affiliations of participants in these meetings—a roster that is overwhelmingly comprised of power company executives, lobbyists and lawyers. Indeed, one of its recent meetings featured only three non-governmental public interest advocates (NRDC, Union of Concerned Scientists and Environmental Law & Policy Center). But it actually doesn’t matter if there were three public interest attendees or 300, because PJM does not allow any non-governmental public interest groups the right to vote in any stakeholder process. So public interest groups can spend their limited resources developing proposals and making impassioned arguments, and only energy companies and other PJM members have the ability to vote on a proposal to advance the offer from the RTO to FERC.

23 At Page 1, www.pjm.com/~/media/library/reports-notices/special-reports/20170615-energy-market-price-formation.ashx
24 www.pjm.com/committees-and-groups/task-forces/ccppstf.aspx
The RTOs are therefore a venue where corporate lobbyists serve as *stakeholder administrators* to manage and shape tariff proposals that become law. At the same time, public interest advocates are barred from voting within PJM, creating the situation where corporations are granted wide access to shape our electricity laws while the public interest is shut out.

The corporate dominance of the stakeholder process extends to RTO management. Since all RTOs are membership organizations, they must be responsive to their members. And the most powerful, well-funded and well-organized members in the RTOs are energy companies. It is therefore little surprise that RTO management proposals tend to reflect the financial interests of those powerful and influential members. As a result, RTO management ends up serving as a tool of advocacy on behalf of incumbent energy companies.

Even assuming that public interest groups could vote in PJMs stakeholder process, they would be diluted with other end users into a voting block that could garner no more than one-fifth of the eligible votes. That’s because PJM, like the other RTOs, created arbitrary voting sectors that assign entities into five different voting blocs: Transmission Owner, Generation Owner, Other Supplier, Electric Distributor and End User.25 These sector voting classifications in no way resemble the true market representation for the entities; Rather, the voting sectors appear to be designed for the primary purpose of expanding the voting power of Transmission Owners and Generators, and diminishing the voting power of end users.

More egregious than PJM’s discrimination against the public interest is FERC’s continued tolerance of it. **No market reform developed by discriminating against the public interest should be considered to be just and reasonable.**

Federal courts have ruled that FERC possesses sweeping authority to impose governance reforms on RTOs. In *California Independent System Operator Corp. v. F.E.R.C.*, the DC Court of Appeals ruled that “[i]f FERC concludes that CAISO [an RTO] lacks the independence or other necessary attributes to constitute an ISO for purposes of Order No. 888, then it need not approve CAISO as an ISO...If California stubbornly refuses to make CAISO conform to FERC’s requirements for ISOs, then FERC can declare that CAISO is not an ISO, or threaten to do so.”26

The main question is whether RTOs should continue their dual role as both operator of the bulk power market and overseeing an internal administrative process to develop market rules and tariffs. The RTOs, with internal structures and alliances to transmission owners and generators, are simply too conflicted to be entrusted with overseeing a stakeholder process where electricity policy is developed. The goal should be separating the internal administrative process to a separate entity, or simply house that function at FERC.

Absent that separation, the following are other governance reforms in order to improve transparency and RTO governance:

- Grant public interest organizations full voting rights within an RTO stakeholder process and consideration of membership fee waivers.
- Provide intervenor compensation or other funding to assist with public interest participation in the RTO stakeholder process.
- Require RTO stakeholder meetings to be recorded, transcribed and freely available to the public.
- Representatives from law firms, consulting firms and other agents that are financially compensated to advocate for the interests of a client must publically disclose those clients when the agent participates in any stakeholder meeting.
- Adjust weighted sector voting ratios to more realistically reflect true stakeholder involvement in energy markets. For example, end users actually represent half of the energy system, and should therefore represent half of the weighted sector voting rights.
- Subject RTO operations to the federal Freedom of Information Act.
- Require stakeholders representing vested economic interests to fully disclose the impact of proposed tariff reforms on their company or client as prerequisite to voting on said reform.
- Limit RTO management role in stakeholder meetings; i.e. make stakeholder meetings truly independent from RTO management.
- Allocate RTO financial resources to stakeholders to fund studies, analyses, etc. to counter RTO management-funded studies.
- Designate at least one member of the RTO Board of Directors that is directly accountable to the public interest within the RTO geographic footprint.
- Disallow RTO management from bypassing stakeholders for FERC tariff and other market design proposals.
- Establish revolving door prohibitions on state utility regulators/utility executives from being employed by the RTO for at least two years.
- Conform RTOs compensation with federal GS guidelines in order to limit excessive RTO executive pay.
• Prohibit companies or other entities under RTO jurisdiction from serving as financial sponsors of special events or activities at RTO meetings.

III. FERC Must Create and Fund the Office of Public Participation

Five-hundred and seventy-seven days ago, Public Citizen joined with 30 organizations across the country to file a Petition for a Rulemaking for FERC to create and fund the Office of Public Participation. In 1978 Congress initiated sweeping changes to the Federal Power Act when it passed Public Law 95-617, the “Public Utility Regulatory Policies Act of 1978” (PURPA). Title II (“Certain Federal Energy Regulatory Commission and Department of Energy Authorities”), Section 212 (“Public participation before Federal Energy Regulatory Commission”) of PURPA ordered the creation of an Office of Public Participation at FERC. Among the duties of the Office are to “coordinate assistance to the public,” and the Office “may, under rules promulgated by it, provide compensation for reasonable attorney’s fees, expert witness fees, and other costs of intervening or participating in any proceeding before the Commission to any person whose intervention or participation substantially contributed to the approval, in whole or in part, of a position advocated by such person.”

Such an office, with the power to provide compensation to public interest intervenors, is needed today more than ever. As FERC contemplates sweeping changes to power markets, it is critical that public interest intervenors have a seat at the table alongside the better-funded generation and transmission owners.

Conclusion

America’s electric power markets are in the midst of a transformation that is disrupting the economics of some merchant nuclear and coal fueled generation units. While this disruption is rendering these units to be uneconomic, consumers and system reliability benefit from these dynamic changes. Aggrieved owners of these power plants successfully advocated for the U.S. Department of Energy and RTOs to declare the markets to be in “crisis” requiring radical rewrites of wholesale power market rules. Public Citizen believes that any federal or state efforts to force consumers to pay for uneconomic baseload generation cannot be considered just and reasonable.

Furthermore, in the interests of maximizing consumer protections in U.S. power markets, fundamental changes to the way that the private Regional Transmission Organizations operate—including the consideration of a full separation between the RTO management of the bulk power market and its operation of internal administrative processes where tariffs and market rules are developed—must be considered. In addition, FERC must create and fund the Office of Public Participation to provide intervenor compensation for public interest participation in FERC actions.