UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	)	**Docket Nos. ER18-1314-000**
	)	**ER18-1314-001**
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PROTEST OF EXELON CORPORATION

PJM Interconnection, L.L.C. ("PJM") has filed two alternative tariff revisions seeking approval under Section 205. Neither is just and reasonable. But Option B is particularly indefensible. By forbidding resources receiving compensation under state environmental programs from making offers reflecting that compensation, Option B makes the Commission's markets less efficient, procures redundant capacity, and distorts energy markets—while drawing arbitrary distinctions between favored and disfavored programs. The Commission should reject PJM's filing.

INTRODUCTION

PJM declares—as its filing's core premise—that when states choose to make payments that recognize the environmental benefits of renewable and nuclear generators, states are "distorting" price signals, and action is needed to redress the supposed distortion.[1] The effect of PJM's requested relief, under either option, will be to pad profits for fossil-fuel generators, on the backs of customers forced to pay more. Option B would prevent state-supported clean generators from clearing *at all*, replacing them with polluting units. Perversely, that will not just force customers

[1] PJM, Capacity Repricing or in the Alternative MOPR-Ex Proposal: Tariff Revisions to Address Impacts of State Public Policies on the PJM Capacity Market at 25-26, 45, Docket No. ER18-1314-000 (Apr. 9, 2018) ("PJM Filing"); *see also id.* at 6, 15, 20, 34, 36, 37, 38, 39.

to pay higher electricity prices, but also will inflict on customers the *additional* costs of grappling with the pollution Option B has created. In three respects, PJM's premise is wrong, and the relief it seeks is badly misguided.

First, PJM's filing ignores basic economics, and gets the nature of the "distortion" exactly backwards. Sound economics recognizes that some generators emit harmful pollutants imposing costs on society, which clean generators avoid—known as "externalities." And sound economics understands that when states tax polluting generators, or pay clean generators for their environmental value, they do not "distort" price signals. They reduce distortions and account for true economic costs and benefits. The only *distortion* comes from treating clean and polluting generators as the same when they are not. For decades, fossil-fuel generators have reaped profits without paying for the pollution they have imposed on society. They now have prevailed upon PJM that not only should they be allowed to continue their free ride, but that PJM should adopt market rules designed to *frustrate* states' modest attempts to compensate clean generators that help to avoid this harm.

Second, PJM's view is inconsistent with the Commission's market design and bedrock principles of federalism. While the "Commission's policies are fuel-neutral,"[2] the Commission has long recognized that the real world is *not*.[3] If *no one* addresses environmental externalities, the Commission's markets could never achieve their goal to provide for "the selection of the least-cost set of resources."[4] So the Commission has designed its markets to complement efforts by other authorities—state and federal—to regulate in this gap. In particular, states have long exercised authority as regulators of "facilities used for the generation of electric energy"[5] to

[2] *ISO New England Inc.*, 162 FERC ¶ 61,205, at P 26 (2018) ("CASPR Order").
[3] *Infra* at 18-22.
[4] CASPR Order at P 21.
[5] 16 U.S.C. § 824(b)(1).

regulate and tax emitting generators and to compensate clean generators for their environmental value. While PJM implies that states forfeited this authority when they chose to restructure retail markets, it cites nothing to support this claim—which is badly misguided. Under our federal system, these programs are in the heartland of states' authority. Thus, both federalism and sound economics require accommodating state efforts to address environmental externalities by allowing state-supported resources to make auction offers reflecting that support (as Option A would do). But these principles also require that those offers be allowed to influence the market price (which Option A would prevent). And in all events, these principles cannot tolerate the result that Option B would yield—forcing customers to pay more to buy capacity from resources that pollute, by preventing clean, state-supported resources from clearing.

Thus far, the Commission's actions have always accorded with the sound principles set forth above—recognizing that when generators receive payments reflecting environmental benefits or other services not captured by the Commission's markets, bids should not be mitigated, because they reflect generators' true economic costs and benefits. PJM's departure from these principles would yield results that are especially untenable because even PJM acknowledges that over the medium term, markets must evolve—one way or the other—to address "currently unvalued" environmental externalities. There is no reason to adopt efficiency-reducing "reforms" that move the markets in the *opposite* direction of what PJM admits is the "theoretical ideal market approach."[6] The Commission should thus reject PJM's filing.

Third, PJM's proposals are not consistent with the Federal Power Act's mandate "to encourage the orderly development of plentiful supplies of electricity … at reasonable prices."[7]

[6] PJM Filing at 54.

[7] *PJM Interconnection, L.L.C.*, 155 FERC ¶ 61,157, at P 30 n.39 (2016) (quoting *Pub. Utils. Comm'n of Cal. v. FERC*, 367 F.3d 925, 929 (D.C. Cir. 2004)).

That mandate is amply satisfied in PJM today. Supplies are plentiful, new gas resources continue to enter the market, and prices paid by customers are historically low. PJM hypothesizes that state environmental programs may undermine investor confidence and reduce willingness to invest. But investors have understood for well over a decade that states can, and do, regulate to affect the generation mix's environmental profile. The possibility that states would continue marching along the path they have set by *expanding* these environmental policies—via joining cap-and-trade programs, reducing emissions permits, or promoting emissions-free generation by increasing renewable targets or maintaining emissions-free nuclear facilities—is just one of many regulatory risks that sophisticated investors consider. With no evidence of any genuine problem—that supply is tightening, that investors are unwilling to invest, or that market participants are incapable of factoring in these regulatory risks as they do myriad other risks—it would not be just and reasonable to approve tariff reforms whose main consequence is to increase the prices paid by customers. Instead, the Commission should continue to narrowly apply mitigation as it traditionally has done in PJM: to new resources, not existing resources, in order to prevent the exercise of buyer-side market power. In short, the Commission should let the market work.

Finally, to the extent that the Commission does believe action is warranted, any just and reasonable capacity market reform must respect five fundamental principles:

(1) The Commission should allow the mix of resources selected by the capacity market to reflect the impact of state programs addressing environmental externalities. Under basic economics, identifying the least-cost set of resources requires accounting for environmental effects. State environmental programs thus complement the Commission's markets to produce a more efficient outcome.

(2) The Commission should approach state environmental programs in a spirit of cooperative federalism. Under the Federal Power Act's division of authority, and pursuant to their historic police powers, states have traditionally regulated the environmental effects of generation. The Commission should respect that role, accepting that state environmental programs will influence which capacity resources are in the market, what costs those capacity resources will need to recover from the market, and what the ultimate market price will be.

(3) The Commission should avoid forcing customers to overprocure capacity. If the Commission adopts market changes that do not allow state-supported resources to clear, the result will be unnecessary overprocurement: Customers will continue to support the environmentally friendly resources their states seek to encourage, and those resources will still provide capacity to the system (though without compensation). Yet customers will be forced to pay for additional capacity that appears to be needed only because the Commission has chosen to ignore the state-supported resources. That is not just or reasonable.

(4) The Commission should treat all government support in an even-handed and nondiscriminatory manner. Distinctions among forms of government support should reflect genuine differences in how the policies affect wholesale markets. Otherwise, those distinctions are arbitrary and are not just or reasonable.

(5) The Commission should avoid taking actions in capacity markets that will worsen existing price suppression in energy markets. Price suppression in energy markets is already a big problem, as PJM admits. Capacity market changes cannot be just and reasonable if they risk exacerbating these problems.

Option B (also called MOPR-Ex) satisfies none of these principles. *First*, it selects an inefficient set of resources by countermanding, rather than accommodating, state environmental policies. It would select an inefficient coal unit at the margin in place of an emissions-free nuclear plant, even though the nuclear plant is lower cost after accounting for environmental externalities.

Second, Option B does not respect the legitimacy of state regulation. Option B works from the theory that, once states decided to depend on wholesale markets for resource adequacy, they forfeited their power to encourage clean over polluting generation.[8] That view is inconsistent with the Federal Power Act ("FPA"), under which states continue to regulate electric generation facilities, even when they sell at wholesale. It is also bad policy. Organized wholesale markets exist because states have decided they are valuable. If states must forfeit core historic police powers—their authority to legislate for "the protection of the lives, limbs, health, comfort, and quiet of all persons"[9]—as the price of admission, then many states may decide that the price is too high. The Commission's policy has always been to complement, not countermand, state environmental programs.

Third, Option B would over-procure capacity and inflate costs. It would require PJM to ignore capacity provided by a state-supported nuclear resource whose mitigated capacity offer is too high to clear, and instead procure redundant capacity. That result is particularly perverse because nuclear plants are the highest-performing and most reliable capacity resources.

Fourth, Option B draws a host of arbitrary distinctions among programs that have equivalent economic effects on wholesale prices. It does so because Option B is the product of a political logroll, not a just and reasonable economic theory. Indeed, before flip-flopping, PJM was

[8] PJM Filing at 21.
[9] *Metro. Life Ins. Co. v. Massachusetts*, 471 U.S. 724, 756 (1985) (quotation marks omitted).

against Option B—telling stakeholders that it could not "recommend[]" this approach because it was "not sustainable."[10] Likewise, the Independent Market Monitor ("IMM") has long opposed many of the exemptions that Option B creates, accepting them only as part of back-room dealmaking with stakeholders that, otherwise, favored the status quo.

For example, Option B exempts certain RPS programs based on whether the state procurement process is sufficiently "competitive and non-discriminatory" to satisfy the IMM. Yet as PJM concedes, RPS programs affect wholesale market prices by inducing the entry of new resources that would be unprofitable without state support. If the goal of Option B is to prevent state policies from affecting wholesale prices, there is no basis for mitigating nuclear and offshore wind, but exempting solar and onshore wind. Option B also arbitrarily excludes from mitigation recipients of non-environmental state subsidy programs, as well as federal production tax credits and tax incentives such as the wind Production Tax Credit and solar Investment Tax Credit. These subsidies indisputably affect wholesale market prices, including by increasing how often energy prices fall below zero. Option B likewise arbitrarily excludes resources that would not be cost-competitive if forced to rely on PJM market revenues alone, but which are able to maintain operation due to guaranteed cost recovery through retail rates. PJM acknowledges that 25% of the resources in the RTO receive guaranteed cost recovery through retail rates. Thus, if the Michigan Public Service Commission decides to promote a zero-emissions policy by allowing the Donald C. Cook Nuclear Plant to recover any market losses through retail rates, no mitigation is applied. But if the Illinois Commerce Commission pursues the same policy by allowing Quad Cities to sell Zero Emission Credits to retail utilities, mitigation is applied. That distinction is indefensible.

[10] *Infra* at 42-43.

Option B also categorically exempts public power, even though doing so invites the direct exercise of buyer-side market power.

Finally, by unnecessarily procuring more capacity than is needed, Option B fails to set "price signals that guide … orderly entry and exit,"[11] resulting in price suppression in the energy markets. PJM admits this will occur. But PJM has done no study to even consider these adverse consequences.[12] That failure is yet another reason why Option B is not just or reasonable.

As explained above, Exelon does not believe that either PJM proposal is just or reasonable. Option A, however, does far less violence to the five key principles that should inform any capacity market reform. It will select the most efficient set of resources by accommodating state environmental programs, and it views such state efforts as complementary to the Commission's goals in wholesale rate-setting. It will procure the right amount of capacity, not additional unneeded capacity. It avoids some of Option B's most egregiously arbitrary distinctions. And it will not worsen energy market price suppression.

Option A could be improved, however, in two respects. First, it unjustifiably exempts from repricing any resource of less than 20 MW. Yet Option A purports to be addressing the aggregate effect of state support payments on capacity prices. Resources smaller than 20 MW are important contributors to that aggregate effect. Second, the proposed materiality screen that triggers repricing—3.5% of the reliability requirement for an LDA or 5,000 MW RTO-wide—is arbitrary. Instead, the Commission should require a screen that is connected to the supposed problem that repricing is purported to solve—the need to attract new investment to ensure reliability.

[11] CASPR Order at P 21.

[12] Indeed, the Issue Charge of the Capacity Construct/Public Policy Senior Task Force excluded consideration of energy market effects. *See* PJM, Issue Charge: Assess state public policy initiatives and the PJM capacity construct (2017), http://www.pjm.com/-/media/committees-groups/task-forces/ccppstf/postings/ccppstf-issue-charge.ashx?la=en.

Accordingly, the Commission should require a price-based materiality screen, so that repricing would not occur when supply remains plentiful, but would be triggered in the event that PJM markets fail to elicit needed new entry. That would achieve PJM's objectives but prevent unnecessary price increases for customers.

PROTEST

I. The Commission Should Reject PJM's Filing Outright Because Its "Two Alternative[]" Approach Contravenes PJM's Tariff And Section 205.

PJM has filed "two alternative[]" proposals under Section 205, inviting "the Commission to decide" what PJM characterizes as the "federal policy question" that divides the alternatives—"accommodate" state programs (PJM's "preferred" approach), or "mitigate" them.[13] Section 205, however, is the wrong procedural vehicle for the relief PJM seeks. If PJM wishes to obtain guidance on policy questions, it should petition for a declaratory order. And if PJM wishes to confer on the Commission broad policy discretion to refashion market rules, it can attempt to carry the burden to invoke Section 206. Section 205, however, does not permit PJM to set a broad policy choice before the Commission by presenting two alternatives that are worlds apart.

To begin, PJM's Tariff plainly does not authorize PJM's approach. True, the tariff of ISO-New England contains a "jump ball" provision that allows submission of an "alternative … proposal."[14] PJM's Tariff, however, nowhere contains authorization to file alternative tariff proposals under Section 205.[15]

Section 205 also does not authorize PJM to present "alternative" tariffs asking the Commission to choose between widely divergent policies. Tellingly, the avenues that allow the Commission to exercise this type of broad discretion—petitions for declaratory orders and Section

[13] PJM Filing at 6, 17-18, 36, 42.
[14] *ISO New England Inc.*, 130 FERC ¶ 61,105, at P 51 (2010).
[15] *See* PJM Tariff § 9.2(a) (setting forth PJM's Section 205 filing rights).

206—do not include the tight timeline that governs Section 205 filings. That is appropriate: When the Commission is exercising that type of broad discretion, deliberation is needed. By contrast, what enables the accelerated litigation that Section 205 demands is the "passive and reactive role" that Section 205 requires the Commission to play: It reviews "the proposed rate scheme" and must "accept or reject the proposal," aside from suggesting "minor" changes, as permitted by *NRG Power Marketing, LLC v. FERC*.[16] That rule protects stakeholders by focusing litigation on the precise proposal presented.[17]

PJM's approach is inconsistent with Section 205's structure. Rather than accepting the Commission's "passive" role[18]—which requires PJM to resolve, in the first instance, each "federal policy question" raised by its filing[19]—PJM asks the Commission to decide. PJM's approach, moreover, would substantially expand the Commission's power under Section 205 beyond what Congress conferred. No longer would the Commission be limited to rejecting or approving (with minor modifications) a *single* proposed tariff. Instead, PJM has offered the Commission two proposals on opposite ends of the spectrum, asking the Commission to approve either one. Given how far apart are Option A and Option B, that vastly expands the range of outcomes.

If the Commission accepts PJM's gambit here, moreover, the Commission can expect to receive many more such Section 205 filings from ISOs and RTOs in the future. Instead of proposing a single tariff revision under Section 205, which may result in a dissatisfied group of stakeholders, RTOs and ISOs can punt to the Commission the responsibility for making divisive policy choices, and require it to do so on the compressed timing required by Section 205. Indeed, PJM has not only submitted two proposed rates (Option A and Option B), but its "affirmative

[16] 862 F.3d 108, 114-15 (D.C. Cir. 2017) (internal quotation marks omitted).
[17] *Id.* at 116 (quotation marks omitted).
[18] *Id.* at 114 (quotation marks omitted).
[19] PJM Filing at 17-18.

notice" inviting the Commission to approve Option B *without* the RPS Exemption effectively adds a third—and arguably, a fourth, as PJM further "offers the option of either (i) applying the standards set forth in Capacity Repricing to govern the treatment of renewables" under Option B, or "(ii) identifying this question for further stakeholder consideration in subsequent processes."[20] The result is that a single tariff may in reality contain dozens of permutations of proposed rates, each of which stakeholders must analyze and comment on; indeed, already public interest organizations have noted the burdens of the need "analyze and prepare detailed comments on not one but two highly complex proposals" in a short comment period.[21] That system is inconsistent not just with the notice that Section 205 is meant to provide, but also the "passive and reactive role" that the Commission must play under Section 205.[22] Instead of approving or rejecting tariffs proposed by utilities, the Commission will face a shelf full of choose-your-own-adventure tariff filings.

The Commission should not entertain PJM's attempt to twist Section 205 to create a new procedural vehicle. If PJM wants to solicit general policy guidance, or to give the Commission broad discretion to reshape market rules, a petition for a declaratory order or Section 206 filing allow PJM to seek such relief. But PJM cannot claim the benefits of these vehicles without accepting their burdens. Because Section 205 does not allow the filing PJM has made, the Commission should reject PJM's filing or, alternatively, decline to consider PJM's Option B.

[20] PJM Filing at 114. PJM's suggestion that the Commission may sever the RPS Exemption is unlawful for reasons explained below. *Infra* at 54-55.
[21] Joint Mot. for Extension of Time to File Comments of Public Interest Organizations at 1 (Apr. 9, 2018).
[22] *NRG*, 862 F.3d at 114, 116 (quotation marks omitted).

II. The Commission Must Accommodate State Payments That Account For Environmental Externalities.

A. Accounting For Environmental Externalities Improves Efficiency And Complements The Design Objective Of PJM's Markets.

By credulously accepting fossil-fuel generators' refrain about the "distorting effect of state subsidies" to "uneconomic" resources,[23] PJM forgets what any first-year economics undergraduate knows: Markets cannot be efficient when large externalities go unaddressed, and subsidies that address externalities make markets *more* efficient, not less. This point is explained at length in the Declaration of Dr. Robert Willig, attached to this filing.[24] But in short: When fossil-fuel generators produce electricity, they create pollutants such as carbon dioxide, sulfur dioxide, nitrogen oxide, ozone, mercury, and particulate matter.[25] These pollutants are harmful to human health and the environment, but these costs generally fall on society, not the generators that produce them. Put otherwise, the costs are "externalized," and hence these pollutants create "negative externalities."[26] These externalities are, economically, a subsidy. Fossil-fuel generators produce this harm, but do not pay. Indeed, for carbon dioxide alone, estimates put this subsidy's value for fossil-fuel generators across PJM at $12.1 billion to $17.7 billion dollars *annually*.[27] Conversely, when clean generators produce electricity without creating this harmful pollution, thereby abating the pollution that would result in their absence, they benefit society. But they do

[23] PJM Filing at 6, 32.
[24] Many of the same points are explained in an April 2018 report by the Institute for Policy Integrity, also attached to this filing. *See* Institute for Policy Integrity, *Capacity Markets and Externalities: Avoiding Unnecessary and Problematic Reforms* (April 2018), http://policyintegrity.org/files/publications/Capacity_Markets_and_Externalities_Report.pdf ("*Capacity Markets and Externalities*").
[25] Willig Decl. ¶ 25; *Capacity Markets and Externalities* at 6.
[26] Willig Decl. ¶¶ 25, 30-31; *Capacity Markets and Externalities* at 6.
[27] These figures reflect 291.9 million tons of CO_2 emitted in PJM in 2017 and 426.6 million tons emitted in 2016, at a cost of $41.40 per ton. *See* Monitoring Analytics, LLC, *2017 State of the Market Report for PJM, Volume 2: Detailed Analysis*, at 361 (Mar. 2018).

not receive compensation from the Commission-regulated markets for providing this benefit. Instead, the benefit is externalized—a positive externality.[28]

Externalities distort incentives, and so result in inefficiencies. When the fossil-fuel generator decides how much to produce, it considers only its private costs, not the full costs to society.[29] When the clean generator weighs the same decision, the same mismatch occurs in the opposite direction. The fossil-fuel generator will produce too much, and the clean generator, too little. As Dr. Willig explains, when incentives are misaligned, the outcome will not be efficient.[30]

This misalignment is fixable. Command-and-control regulation, for example, can forbid especially polluting methods. But markets are often superior. The polluting activity can be taxed to allow consideration of private costs and social costs.[31] Or clean generators can be paid for the benefits they provide to society—again, aligning private incentives with social benefits.[32]

The Commission's approach to these issues has been one of cooperative federalism—one that "fulfill[s the Commission's] statutory mandate under the FPA to ensure that … rates … are just, reasonable and not unduly discriminatory or preferential" by "respect[ing] the traditional role of states."[33] The Commission thus far has elected to make its market rules "fuel-neutral,"[34] and has not attempted itself to redress the externalities described above—for example, by incorporating a Commission-established carbon price into wholesale markets. Instead, the Commission has looked to other regulators—in particular, states—to address these externalities.[35] By statute and by history, states are well-suited to do so. The FPA expressly protects states' authority over

[28] Willig Decl. ¶ 25.
[29] *Id.* ¶¶ 30-31.
[30] *Id.* ¶ 31; *see also Capacity Markets and Externalities* at 7.
[31] Willig Decl. ¶ 32.
[32] *Id.* ¶¶ 32-37.
[33] *California Indep. Sys. Operator Corp.*, 116 FERC ¶ 61274, at P 1112 (2006).
[34] CASPR Order at P 26.
[35] *Infra* at 18-22.

"facilities used for the generation of electric energy,"[36] and the Supreme Court has explained that "regulation of utilities is one of the most important of the functions traditionally associated with the police power of the states."[37] Likewise, "[l]egislation designed to free from pollution the very air that people breathe clearly falls within the exercise of even the most traditional concept of … the police power."[38]

The range of actions states have taken with respect to environmental externalities—cap-and-trade programs, environmental tax credits, RPS programs, zero-emissions credit programs, and others—have furthered the Commission's "first principles of capacity markets" set forth in the CASPR Order.[39] The Commission's markets fulfill all of their goals *better* when states are addressing environmental externalities and the Commission's markets can operate against the backdrop of such state environmental programs.[40] When private and social costs are better aligned, "competition" is more "robust," and the markets' "price signals" more accurately "guide the orderly entry and exit of capacity resources" to select the "set of resources" that is truly "least cost."[41] By contrast, if the Commission designed its market rules to insulate its markets from the effects of state environmental initiatives, yet did not itself incorporate any carbon price, that would recreate the same type of "regulatory void" that the Commission was created to address[42] and doom the Commission's markets to inefficiency. Wholesale rates designed to *prevent* consideration of environmental externalities could never be just and reasonable.

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[36] 16 U.S.C. § 824(b)(1).
[37] *Ark. Elec. Co-op. Corp. v. Ark. Pub. Serv. Comm'n*, 461 U.S. 375, 377 (1983); *see Exxon Mobil Corp. v. U.S. EPA*, 217 F.3d 1246, 1255 (9th Cir. 2000); *Nat'l Solid Wastes Mgmt. Ass'n v. Killian*, 918 F.2d 671, 676 (7th Cir. 1990), *aff'd sub nom. Gade v. Nat'l Solid Wastes Mgmt. Ass'n*, 505 U.S. 88 (1992).
[38] *Huron Portland Cement Co. v. City of Detroit*, 362 U.S. 440, 442 (1960).
[39] CASPR Order at P 21.
[40] *See ISO New England Inc.*, 158 FERC ¶ 61,138, at P 58 (2017).
[41] CASPR Order at P 21; *see* Willig Decl. ¶ 54.
[42] *FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 767 (2016).

These basic principles—the economics of externalities—are what is missing from PJM's contrived picture of how state payments "[s]ignificantly and [a]dversely [a]ffect [w]holesale [m]arket [p]articipants" by unjustly "impos[ing] costs on market participants."[43] In PJM's narrow view, externalities do not exist, the "right" price is the one free of any state environmental policy, and the result of state intervention is that one market participant effectively funds subsidies to another. But in the real world, externalities are front-and-center. So, for example, PJM asserts that payments to compensate zero-emission resources for their environmental benefits might reduce capacity market revenues for a 1,000 MW coal plant by $6.75 million.[44] But PJM ignores that, from carbon dioxide alone, "the annual external damages … [from] a typical 1,000 MW coal plant … would amount to $234.3 million."[45] Intervention, by states or the Commission, is essential to address such externalities. And absent such intervention, the result is that fossil-fuel generators impose the costs of their pollution on everyone else, allowing them to bid lower than they would be able to bid if they were forced to internalize those costs.[46] Indeed, consistent with these principles, the Commission correctly rejected the argument that ISO-New England's former renewables exemption would "result in an inappropriate wealth transfer."[47]

Correcting PJM's hypotheticals shows what PJM misses.[48] As in PJM's hypothetical, suppose a system has 200 MWs of load, and three resources, each with 100 MWs of capacity. Two burn fossil fuels: A "competitive" resource needs at least $40/MW-day to meet its avoided costs, and a "marginal" resource needs $45/MW-day. The third is a "zero emission" resource, which requires $50/MW-day but avoids at least $10/MW-day in pollution costs that the other two

[43] PJM Filing at 29.
[44] *Id.*
[45] *Capacity Markets and Externalities* at 11.
[46] *Id.* at i, 7; Willig Decl. ¶ 13(c).
[47] *ISO New England Inc.*, 158 FERC ¶ 61,138, at P 58 (2017).
[48] *See generally* Willig Decl. ¶¶ 41-43.

plants emit. As shown in Figure 1, with no intervention, the Competitive and Marginal Resources clear at a clearing price of $45/MW-day, and the Zero Emission Resource does not and retires.

Figure 1: Without State Intervention

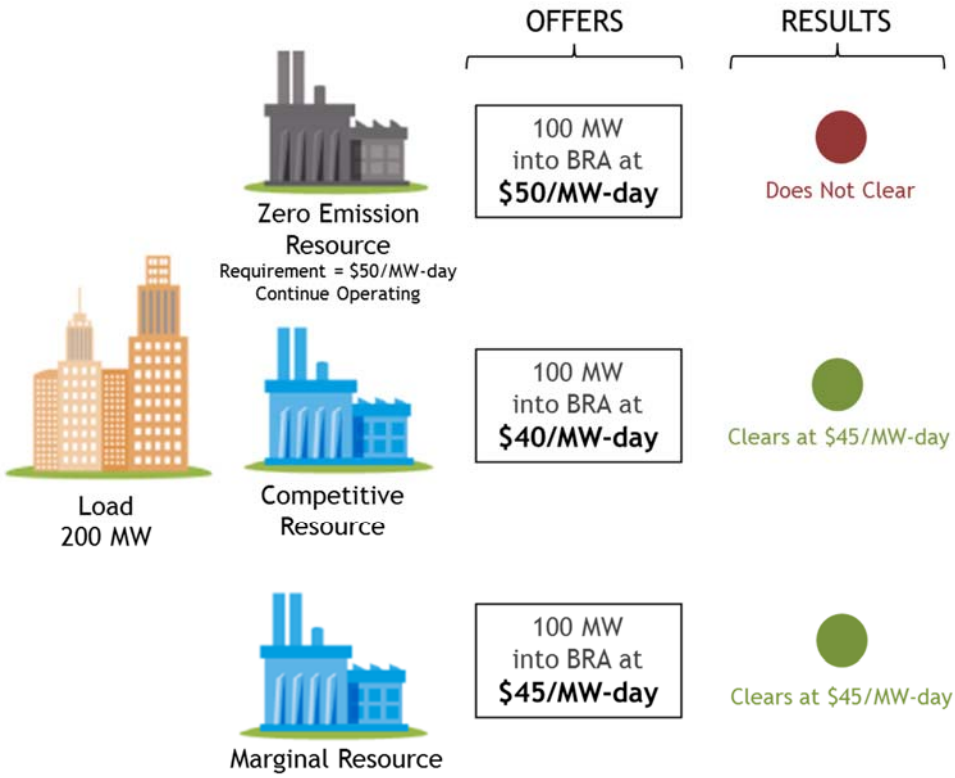
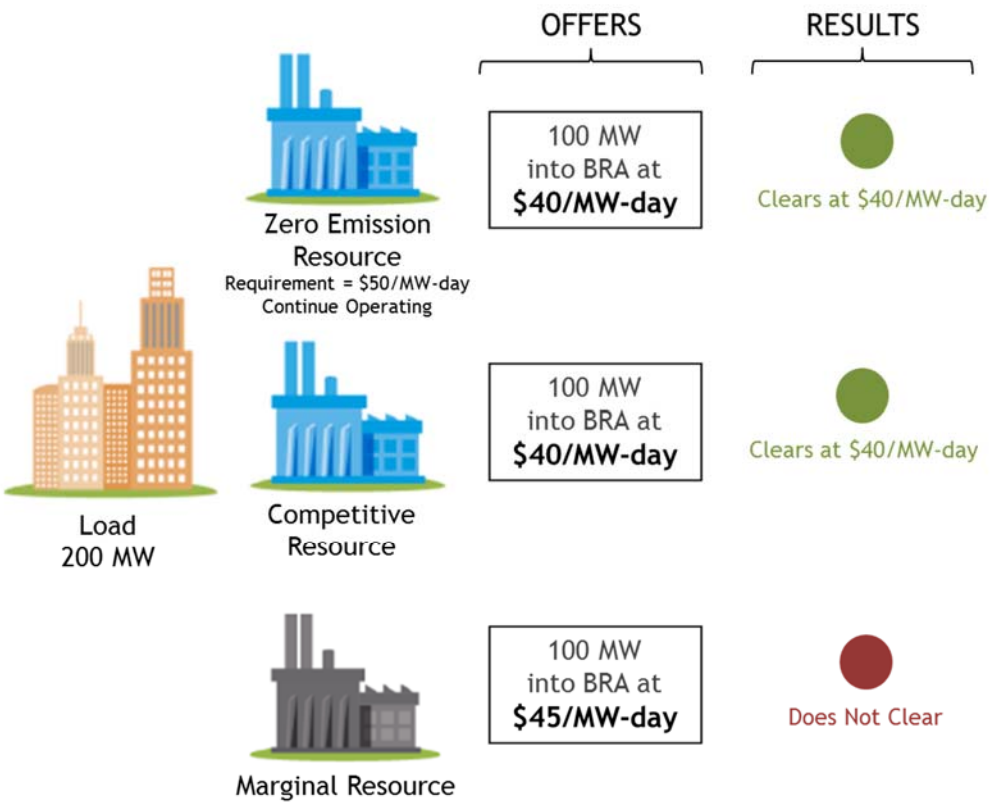


Figure 2 takes this system and adds an environmental attribute payment of $10/MW-day to the Zero Emission Resource, to compensate for the pollution avoided. With this payment, the Zero Emission Resource will bid as low as $40/MW-day, accounting for its $50/MW-day costs and the $10/MW-day attribute payment. As a result, the Competitive Resource and the Zero Emission Resource clear; the Marginal Resource does not clear.

Figure 2: With State Intervention



This result is more efficient. The first market selected the polluting Marginal Resource over the Zero Emission Resource, even though the Marginal Resource, when pollution costs are taken into account, is more costly: $45/MW-day in avoided costs, plus $10/MW-day in pollution costs. The attribute payment fixes this flaw, with the result that the market selects the two resources that are least cost all things considered.[49] To be sure, the Marginal Resource is worse off: It no longer clears. But the Marginal Resource *should not* clear an efficient market.[50] Likewise, as in PJM's hypothetical, the Competitive Resource in some sense "pays" for part of the attribute payment: It loses $5/MW-day due to the market clearing at $40/MW-day instead of $45/MW-day. But that is not unfair or inefficient: The Competitive Resource benefits from not having to pay the $10/MW-

[49] Willig Decl. ¶¶ 43, 52; *see Capacity Markets and Externalities* at 7.
[50] Willig Decl. ¶¶ 43, 52; *see Capacity Markets and Externalities* at 7.

day in pollution costs that it creates, and the price reduction only partially offsets the windfall.

The upshot is that actions to address externalities promote the efficiency of the Commission's markets. PJM's proposals cannot be just and reasonable when they are premised on ignoring that fact.

B. The Commission Has Properly Accommodated State Payments For Environmental Attributes In Its Markets.

The Commission's decisions, unlike PJM's filing, have always been consistent with the sound economic principles outlined above. The Commission has not given *all* state policies a free pass: When state policies reflect exercises of buyer-side market power and "artificially depress[] capacity prices" by supporting new entry that is truly "uneconomic," the Commission has acted.[51] But when policies address environmental externalities, the Commission has explained that these "policy objectives" are "legitimate,"[52] and it has always made sure that those policies would be accommodated. Never has it sought to *thwart* their effects. Thus, the Commission has long recognized that state command-and-control "environmental regulation … driv[es] significant changes in the mix of resources" by increasing costs of fossil-fuel generators, and "resulting in the early retirement of some coal-fired generation."[53] The Commission has not attempted to *counteract* those pro-efficiency results by rejiggering auction rules to offset the costs of regulation. Likewise, when states have exercised their authority to incentivize clean generators, the Commission has affirmed that states may "encourage renewable or other types of resources" even when doing so "allow[s] states to affect the [wholesale] price" or makes clean generation "more competitive in a cost comparison with fossil-fueled generation."[54] States are "free" to incentivize

[51] *PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,022, at P 141 (2011).
[52] *ISO New England Inc.* 158 FERC ¶ 61,138, at P 68 (2017).
[53] *Transmission Planning & Cost Allocation*, 139 FERC ¶ 61,132, at P 5 (2012).
[54] *S. Cal. Edison Co.*, 71 FERC ¶ 61,269, 62,080 (1995).

clean generation, the Commission has explained, "even if the price signals in the regional wholesale capacity market indicate that [those] resources are [not] needed."[55]

PJM implies that, by restructuring their retail markets and joining PJM, states forfeited their right to take actions affecting "resource entry and exit."[56] If accepted, this view would condemn a broad swath of state programs, from tax credits and RPS programs to pollution controls and cap-and-trade. It would also frustrate states' attempts to comply with the Clean Air Act ("CAA"), which sets air-quality standards for many pollutants produced by fossil-fuel plants. For example, the Environmental Protection Agency recently designated 22 areas—including in several PJM states—as nonattainment for ozone.[57] On PJM's view, if states favor clean over fossil-fuel resources to meet CAA obligations, these resources' bids are subject to mitigation.[58]

PJM, however, cites no case or Commission decision that supports its view. And it is false. Restructured states retain the, like other states, authority they have exercised for centuries over "facilities used for the generation of electric energy," which the FPA expressly protects.[59] Indeed, there is "a strong presumption against finding" that the "powers traditionally exercised by states" have been superseded under the FPA.[60] In no manner did states give up their authority to regulate the environmental effects of generation by restructuring and joining PJM. To the contrary, the D.C. Circuit has held that restructured states "retain the right to forbid new entrants from

[55] Amicus Br. of United States at 33, *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288 (2016) (No. 14-614), 2016 WL 344494.
[56] PJM Filing at 21.
[57] EPA, News Release, *EPA, Working with States and Tribes, Takes Next Steps on 2015 Ozone Designations* (May 1, 2015), https://www.epa.gov/newsreleases/epa-working-states-and-tribes-takes-next-steps-2015-ozone-designations.
[58] *Cf.* EPA, *Roadmap for Incorporating Energy Efficiency/Renewable Energy Policies and Programs into State and Tribal Implementation Plans* at 12-13, 20-21 (July 2012), https://www.epa.gov/sites/production/files/2016-05/documents/eeremanual_0.pdf (explaining how state policies favoring clean generation, like RPS programs, can be important elements of state and tribal implementation plans under the CAA).
[59] 16 U.S.C. § 824(b).
[60] *Niagara Mohawk Power Corp. v. Hudson River-Black River Regulating Dist.*, 673 F.3d 84, 94 (2d Cir. 2012).

providing new capacity, to require retirement of existing generators, to limit new construction to more expensive, environmentally-friendly units, or to take any other action in their role as regulators of generation facilities."[61] And proof positive that states did not, by joining PJM, give up this authority is that PJM also contains *unrestructured* states. PJM does not attempt to explain how membership in PJM can be incompatible with state actions to affect the generation mix when some PJM states exercise virtually *plenary* authority over the generation mix.

Indeed, the Commission has *ensured* that state environmental programs can affect wholesale markets—even in restructured states. For example, the Commission approved the proposal of the California Independent System Operator Corporation ("CAISO") to lower its "bid floor" in energy markets "from negative $30/MWh to negative $150/MWh."[62] It permitted "variable energy resources" to bid at such extremely low prices because they "generally receive, in addition to market revenues, production tax credits, renewable energy credits, and contractual energy payments."[63] As a result, such variable resources are allowed to submit large negative energy offers, and presumably reduce energy market revenues for other participants—because the Commission understood that the negative $150/MWh offer reflects the "opportunity cost" of not receiving significant revenues tied to clean energy production.[64] Likewise in New England, the Commission approved the deduction of revenues from REC payments in the calculation of the offer review trigger price applicable to new renewable resources,[65] and exempted 200 MW of new renewable generation from ISO-NE's MOPR[66]—until expansion of renewables mandates made

[61] C*onnecticut Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477, 481 (D.C. Cir. 2009).
[62] *California Indep. Sys. Operator Corp.*, 145 FERC ¶ 61,254, at P 34 (2013).
[63] *Id.* at P 5.
[64] *Id.* at P 34.
[65] *ISO New England Inc.*, 146 FERC ¶ 61,084, at P 32 (2014) (rejecting argument that REC revenues are out-of-market revenues, and approving reduction of ORTP for new renewable resources to account for REC revenues).
[66] *ISO New England Inc.*, 158 FERC ¶ 61,138, at P 4 (2017).

clear that *yet more* accommodation of renewable resources was necessary, which the Commission supplied in the CASPR Order.

The Commission's acceptance of state environmental programs as complementary to its markets is consistent with a more general principle: When generators receive compensation for services not captured by the Commission's markets, they properly take account of that compensation in their bids. That is why the Commission has held that resources operating pursuant to reliability services support agreements ("RSSAs") should be permitted to submit *de minimis* bids into capacity markets: Because the units "are needed for reliability and would clear a capacity market that also reflected local reliability needs, RSSA revenues received by these resources reflect the value of the services provided by these resources to customers."[67] Similarly, revenues from state environmental programs represent the "value of the [environmental] services provided by these resources."[68] The Commission should follow its precedent and reject proposed market reforms intended to insulate market prices from the effects of state environmental programs.

Even on the one occasion where the Commission did reset market prices to a higher level than would result from offers reflecting state compensation, the Commission made clear that it did so in the spirit of cooperative federalism and in recognition of states' legitimate role. In the CASPR Order, ISO-NE explained to the Commission that "New England states recently have significantly increased both their targets and their efforts to promote the development of renewable resources," and the Commission observed that ISO-NE's existing exemption from its MOPR for renewable resources "would not be able to accommodate" the region's new clean energy

[67] *Indep. Power Producers of N.Y., Inc. v. N.Y. Indep. Sys. Operator, Inc.*, 150 FERC ¶ 61,214, at P 66 (2015), *reh'g pending*.
[68] *Id.*

initiatives.[69] So ISO-NE created CASPR "to better accommodate [these] actions."[70] And the Commission approved CASPR as just and reasonable because it succeeded in this goal by "accommodat[ing] the entry of new Sponsored Policy Resources into the FCM over time" and so providing a "'better way to integrate these state policies into the competitive wholesale markets.'"[71] Exelon recognizes that some parties have argued on rehearing that CASPR's design may not be effective in achieving its goals, but the key point is that the Commission approved CASPR on the premise that it "provides a reasonable opportunity to accommodate state sponsored resources in the FCM."[72] Accepting Option B, in particular, would require the Commission to overturn this long line of precedent.

C. The ZEC Program, Which The PJM Filing Targets, Is A Legitimate And Unusually Efficient State Effort To Account For Environmental Externalities.

PJM's filing makes no secret that it targets Illinois' Zero Emission Credit ("ZEC") Program.[73] But there could not be a less justified occasion for the Commission to depart from its precedent of accommodating state environmental programs. The ZEC Program is distinctive only in that it is unusually *efficient*. It does not warrant mitigation under any defensible theory.[74]

In its purpose, the ZEC Program is similar to the RPS and renewable energy credit ("REC") programs the Commission has long accommodated and allowed to affect wholesale prices. It aims to ensure Illinois can "achieve the State's environmental objectives and [ ] reduce the adverse impact of emitted air pollutants on the health and welfare of the State's citizens."[75] Illinois

[69] CASPR Order at PP 24, 26, 101 n.185.
[70] *Id.* at P 1.
[71] *Id.* at P 6 (quoting ISO-NE Transmittal at 4).
[72] *Id.* at P 102.
[73] PJM Filing at 25-27, 45, 101.
[74] *See generally* Willig Decl. ¶¶ 47-60.
[75] Illinois SB 2814, § 1.5, 99th Gen. Assemb. (Ill. 2016), http://www.ilga.gov/legislation/99/SB/PDF/09900SB2814enr.pdf ("Ill. 2016 Energy Act").

determined that action on nuclear generation was necessary because, despite its enormous environmental benefits, nuclear energy had thus far been excluded from the state's environmental initiatives, putting plants at risk of retirement. State agencies had concluded that premature closure of nuclear plants would significantly increase greenhouse gas emissions and inflict billions of dollars in harm.[76] The legislature thus found that "Illinois must expand its commitment to zero emission energy generation and value the environmental attributes of zero emission generation that currently falls outside the scope of the existing renewable portfolio standard, including … nuclear power."[77]

Illinois employed the same mechanism that REC programs use. Under the ZEC Program, the Illinois Power Agency ("IPA"), a state agency, will procure contracts for ZECs from nuclear facilities capable of generating zero-emissions credits cost-effectively in an amount equal to 16% of electricity used in Illinois in 2014. Like a REC, a ZEC values the environmental attributes of zero-emissions generation. One ZEC reflects one megawatt-hour of zero-emission production. Of necessity, the ZEC Program selects participants and sets prices administratively: Nuclear plants are few in number, and auctions would invite anticompetitive conduct. Illinois thus charged the IPA with developing a procurement plan and selecting participating plants based on public interest factors, including 1) "minimizing carbon dioxide emissions that result from electricity consumed in Illinois," 2) minimizing sulfur dioxide, nitrogen oxide, and particulate matter emissions that adversely affect the citizens of the State," and 3) "the incremental environmental benefits resulting from the procurement, such as any existing environmental benefits that are preserved by the

[76] Ill. Commerce Comm'n et al., *Potential Nuclear Power Plant Closings in Illinois: Impacts and Market-Based Solutions* at 122 (Jan. 5, 2015), https://www.nirs.org/wp-content/uploads/neconomics/illhr1146report115.pdf (estimating the societal cost of carbon occurring during 2020-29 associated with nuclear plant closures at $2.5-$18.6 billion).

[77] Ill. 2016 Energy Act § 1.5(3).

procurements … and would cease to exist if the procurements were not held, including the preservation of zero emission facilities."[78] On January 25, 2018, the IPA announced that that the Quad Cities and Clinton plants had been selected.[79]

The ZEC Program's pricing mechanism ensures that it will be more economically efficient than other state environmental initiatives. The ZEC Program sets the value of ZEC payments based on the social cost of carbon, as reported by the United States Interagency Working Group in effect at the time of the law's promulgation, multiplied by the emissions rate of a natural gas combined-cycle plant.[80] ZEC payments can never exceed that amount. As a result, participating nuclear plants will never receive payments that exceed their environmental value. And in estimating that value, the ZEC price is conservative. First, it measures only nuclear plants' carbon benefits, ignoring their value in avoiding other harmful pollutants, such as particulate matter and mercury. Second, the ZEC price assumes that combined-cycle gas plants would replace retiring nuclear plants—but in fact, in the PJM region, the marginal resources that would likely replace nuclear plants have even higher emissions than the gas plants assumed in setting the ZEC value.[81] Moreover, two additional caps further limit the payments that ZEC plants can receive.[82]

Dr. Willig explains why the ZEC Program's unusually efficient structure cannot warrant mitigation under any defensible theory. By compensating nuclear plants for the environmental benefits they provide, the program addresses an environmental externality and brings private incentives back in line with social costs and benefits.[83] And because payments are capped at a conservative estimate of this environmental value, the ZEC Program's outcome is guaranteed to

[78] *Id.* at (d-5) Zero emission standard (1) (C).
[79] Willig Decl. ¶ 48.
[80] *Id.* ¶ 49.
[81] *Id.* ¶ 50.
[82] *Id.* ¶ 66; Ill. 2016 Energy Act at (d-5) Zero emission standard (1)(B), (C-5).
[83] Willig Decl. ¶¶ 51-54.

be efficient: The plants will rationally choose to operate only if their value to society—reflected in the market revenues for their electricity, capacity, and ancillary services, plus the ZEC payments for their environmental benefits—exceed their costs.[84] If not, the ZEC Program will not save the plants. The ZEC Program does not protect participating plants against risks that prices will fall, or their costs will increase, to levels that render these plants uneconomic even taking account of their environmental benefits. In this respect, the ZEC Program compares favorably with REC programs, which do not cap payments at the resources' environmental value, and can yield payments that are vastly in excess of any plausible estimate of this value—like the payments of $2,575/MW-day and $4,751/MW-day noted by PJM's expert, Dr. Giacomoni.[85]

The ZEC Program's carefully crafted scheme thus brings the Commission's markets closer to what perfect economic efficiency would dictate.[86] In so doing, the ZEC Program may well displace marginal fossil-fuel generators that, absent the ZEC Program, would have cleared. But that is efficient: In a market that takes into account full social costs and benefits, these plants *should not* clear, and ZEC plants should. And the generators that *do* clear still make a profit. All receive a market clearing price equal to or in excess of their offers.[87]

D. PJM Fails To Justify Why "Workably Competitive" Wholesale Markets Should Be Insulated From Pro-Efficiency State Programs That Address Environmental Externalities, Particularly Given The Many Actions That Go Unmitigated.

PJM's decision to target programs redressing environmental externalities is especially indefensible given its admission that wholesale markets are affected by "all manner of distortions that might make prices imperfectly competitive," and that "benefit … some at the expense of

[84] Willig Decl. ¶¶ 51, 62-63.
[85] Giacomoni Aff. ¶ 35; *see also* Willig Decl. ¶¶ 56, 59.
[86] Willig Decl. ¶ 54.
[87] *Id.* ¶ 52.

others."[88] PJM invokes the "Commission's 'workably competitive' standard"[89] without explaining why that standard requires action to target programs addressing environmental externalities—which, when well designed, only improve efficiency—and *not* myriad interventions that affect wholesale markets with weaker or no pro-efficiency justifications.

A good starting point for a list of subsidies that affect wholesale markets comes, ironically enough, from PJM's enumeration of the "local, state, and federal subsidies" that it "propos[es] to *exclude* … from consideration" in its definition of "Actionable Subsidies."[90]

- "[P]ayments (including payments in lieu of taxes), concessions, rebates, subsidies, or incentives designed to incent, or participation in a program, contract or other arrangement that utilizes criteria designed to incent or promote, general industrial development in an area";

- "[P]ayments, concessions, rebates, subsidies or incentives designed to incent, or participation in a program, contract or other arrangements from a county or other local governmental authority using eligibility or selection criteria designed to incent, siting facilities in that county or locality rather than another county or locality"; or

- "[F]ederal government production tax credits, investment tax credits, and similar tax advantages or incentives that are available to generators without regard to the geographic location of the generation."[91]

Some marginal gas-fired generators would not exist without subsidies from various economic development programs. Likewise, the pervasive practice of states and localities of offering subsidies "designed to incent … siting facilities in" particular locations assuredly results in development of some resources that, otherwise, would not exist *at all*. Indeed, some of these programs are enacted or expanded to spur development of *particular* plants. In Pennsylvania, for example, a coal-to-gas conversion was the "anchor tenant" for a new "Keystone Opportunity Expansion Zone"—which enabled this plant to be built by eliminating state and local taxes through

[88] PJM Filing at 15.
[89] *Id.* at 16 (quoting *PJM Interconnection, L.L.C.*, 110 FERC ¶ 61,053, at P 53 (2005)).
[90] PJM Filing at 70 (emphasis added).
[91] *Id.*; *see* proposed PJM Tariff § 1, Definitions L-M-N (Option A).

2023.[92] Indisputably, those subsidies affect who participates in PJM's auctions and the prices that result. Yet PJM ignores them. PJM's sudden and selective urgency is especially unjustified because these subsidies, unlike environmental programs, have no sound economic justification.

PJM's defense is that "these exclusions are the same as those employed … prior to" the *NRG* remand.[93] But that is no justification. The prior MOPR was solely "a mechanism that seeks to prevent the exercise of buyer-side market power," and the Commission found that the type of subsidies discussed above "do not raise price suppression concerns" reflecting "buyer-side market power."[94] PJM's present filing, however, gives mitigation a new and vastly broader purpose—to combat any "material price suppression effect," whether or not due to buyer-side market power.[95] With this expanded role, there is no justification for excluding these subsidies.

Likewise unjustified is PJM's sudden concern about state environmental programs when it continues to exclude from mitigation "vertically integrated, cooperative, and municipal utilities."[96] The regulatory structure that supports such entities is, economically, a subsidy—and a massively distorting one at that. Such entities sell energy and capacity in wholesale markets, but if their revenues are less than their costs, captive ratepayers make up the difference. That guarantee is a subsidy, insuring the utility against losses that, otherwise, it would have to bear.[97] This subsidy, moreover, affects which resources participate in wholesale markets and, hence, the prices that result—exactly what PJM's filing purports to target. Consider, for example, a high-cost coal plant. If its owner had to rely solely on market revenues, it might well retire. A vertically integrated

[92] *Sunbury Generation Lands First Tenant for Old Trail Industrial Park KOEZ*, Oil & Gas 360 (Oct. 28, 2015), https://www.oilandgas360.com/sunbury-generation-lands-first-tenant-for-old-trail-industrial-park-koez-with-announcement-of-financing-of-panda-hummel-station-power-plant/.
[93] PJM Filing at 70.
[94] *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at PP 20, 56, 66 n.47 (2013).
[95] PJM Filing at 35; *see* Willig Decl. ¶ 75.
[96] PJM Filing at 73-74.
[97] Willig Decl. ¶ 80.

utility, however, can continue running the plant, shifting losses to captive ratepayers. And because this utility can bid this high-cost coal plant into the auctions as a price taker, it will pull down clearing prices.[98] Indeed, the Commission has *acknowledged* "the potential competitive impact of" vertically integrated utilities.[99] Yet PJM has not seen fit to act in response to those impacts.

Again, PJM's selective targeting is particularly untenable because there is no sound pro-efficiency justification for exempting vertically integrated utilities. To the contrary, it has long been understood that, as a result of the implicit subsidy given to vertically integrated utilities, they have incentives to overinvest.[100] Yet PJM not only exempts this subsidy from mitigation, but it *doubles down* on the permissible distortion by authorizing vertically integrated utilities to overbuild by up to 1300 MWs—roughly the size of the Quad Cities plant targeted by PJM—without mitigation.[101] What is more, PJM's filing perversely embraces the ability of states with vertically integrated utilities to take the same actions that, when taken by other states, PJM *condemns* as "price suppression." If a nuclear power plant owned by a vertically integrated utility is not covering its full costs in the wholesale markets, a state that wishes to preserve the plant's environmental benefits can authorize the plant to recover its full costs from ratepayers. That is no mere hypothetical: To avoid the risk that it might lose the environmental benefits of nuclear plants, Minnesota is considering guaranteeing those plants cost recovery as "carbon reduction facilities."[102] A regulated PJM state, such as Michigan or Virginia, might someday choose to do

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[98] *Id.*

[99] *See, e.g., Utilization of Elec. Storage for Multiple Servs. When Receiving Cost-Based Rate Recovery*, 158 FERC ¶ 61,051, at P 22 (2017) (acknowledging "the potential competitive impact of [vertically integrated utilities] on other competitors in those markets").

[100] *See generally* Averch & Johnson, *Behavior of the Firm Under Regulatory Constraint*, 52 Amer. Econ. Rev. 1052 (1962); *Conn. Dep't of Pub. Util. Control v. FERC*, 593 F.3d 30, 35 (D.C. Cir. 2010) (describing this "Averch–Johnson effect" as "familiar").

[101] PJM Filing at 28-29; Proposed PJM Tariff, Attachment DD § 5.14(h)(7)(d) (Option A & Option B).

[102] *See generally* S.F. No. 3504, 19th Sess. (Minn. Mar. 6, 2017), https://www.revisor.mn.gov/bills/text.php?number=SF3504&version=0&session_year=2018&session_number=0&format=pdf.

the same. PJM offers no persuasive reason why out-of-market revenue derived from guaranteed retail rate recovery should be exempt from mitigation, yet revenue derived from ZECs purchased by retail utilities should be subject to mitigation. Both advance the same policy of supporting zero-emissions facilities that would otherwise retire.

Tellingly, PJM does not claim that the *effects* of vertically integrated utilities are less than the state environmental programs its filing targets. Nor could it. A *quarter* of generation in PJM's markets "is owned by traditionally regulated, vertically integrated public utilities or public power."[103] And there can be no doubt that a substantial part of this generation would be uneconomic without the implicit subsidy provided by captive ratepayers. As a conservative estimate, PJM contains 5.5 UCAP GW of small and medium coal plants under 600 MW owned by vertically integrated utilities, which almost certainly would not be economic outside the vertically integrated model.[104] That dwarfs the PJM capacity receiving payments under the Illinois ZEC Program. Instead, PJM's only justification is—again—that the Commission previously exempted vertically integrated utilities from PJM's MOPR because they "do not raise concerns of possible price suppressive intent."[105] That justification fails for the same reason already explained: The self-supply exemption may be justified so long as mitigation remains limited to addressing buyer-side market power, but the entire *premise* of PJM's filing is that mitigation should be expanded to address any "material price suppression effect."[106] Indeed, PJM elsewhere proclaims that mitigation should apply "regardless of intent."[107]

[103] PJM Filing at 9.
[104] The underlying data for this calculation comes from PJM's resource model for the 2020/21 Base Residual Auction, http://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2020-2021-rpm-resource-model.ashx?la=en. The units at issue are Chesterfield 3-5, Clover 1-2, Mt. Storm 1-3, Clinch River 1-2, and Ft. Martin 1-2, and Spurlock 1-4.
[105] PJM Filing at 73-74.
[106] *Id.* at 35.
[107] *Id.* at 15 n.37 (quotation marks omitted).

When PJM tries to explain why its "Actionable Subsidy" definition excludes federal subsidies, its filing descends into incoherence. PJM does not claim that it has excluded federal subsidies because their effects are small, or especially pro-efficiency. Nor could it. Every year, the U.S. government subsidizes *fossil-fuel generators* to the tune of $4.7 billion.[108] That massive subsidy has *no* pro-efficiency justification. The federal government's pro-environmental subsidies, such as the Production Tax Credit ("PTC") for wind, likewise are large and have significant effects: Without the PTC, wind generation would not be built, and the low wind bids that result from the PTC reduce capacity prices by 2.4% across PJM and 6.1% in the ComEd zone

Table 1: Impact Of Subsidized Wind On PJM Capacity Prices

Estimated Impact of Subsidized Renewables on PJM Capacity Prices in 2020/21 Base Residual Auction
WIND ONLY

	Cleared Renewable UCAP (MW)				2020/21	Estimated BRA Price if Wind	Price Suppression
Region	Wind	Solar	Biomass	Total	BRA Price ($/MWD)	Bid at Net CONE x B ($/MWD)	Due to Wind (%)
RTO	412	0	0	412	76.53	78.45	-2.4%
ComEd	356	0	0	356	188.12	200.30	-6.1%
MAAC	120	0	0	120	86.04	87.02	-1.1%
EMAAC	0	0	0	0	187.87	187.87	0.0%
	888	0	0	888			

Sources: Cleared renewable UCAP per PJM 2020/21 BRA results. Regional renewable shares estimate based on 2020/21 resource model. Biomass assumed to include wood, other gas, and other liquid resource categories. Price impact of renewables estimated based on PJM 2020/21 RPM Base Residual Auction sensitivity analysis.

The PTC cashes out to $815/MW-day, which vastly exceeds any plausible estimate of wind power's environmental benefits.[109]

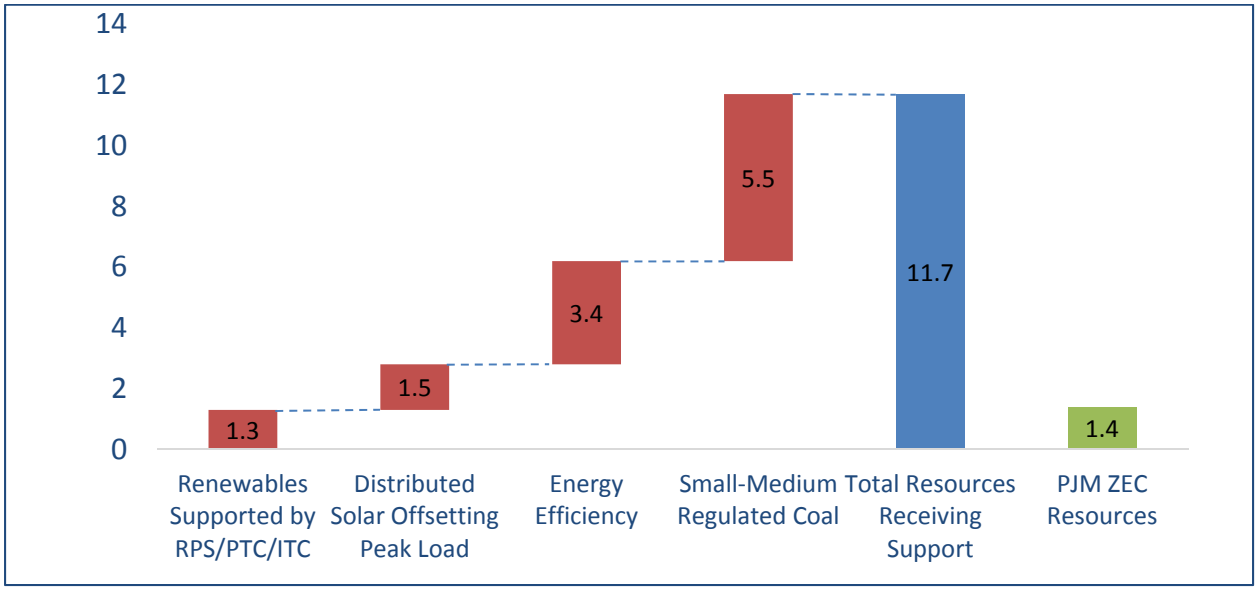
PJM can only aver that it "strains credibility to believe that the Commission's jurisdiction under the FPA would extend to countermand other acts of Congress, including … the production tax credit."[110] But the premise of PJM's Capacity Repricing proposal, at least, is that "this approach result[s] in *respecting and accommodating* state policy choices."[111] PJM cannot say with

[108] *Capacity Markets and Externalities* at 17.
[109] This number is based on the same assumptions used in the Giacomoni Affidavit—a 28% capacity factor and 15% capacity credit for wind—and the $18.2/MWh PTC applicable to new builds commencing construction in 2018.
[110] PJM Filing at 71.
[111] *Id.* at 46 (emphasis added).

a straight face that the *same action*—repricing—is respectful and accommodating when it comes to states, but "countermand[ng]" as to federal policies. And if applying Capacity Repricing (or MOPR-Ex) *were* tantamount to countermanding federal policies, PJM does not try to explain why the Commission would have *greater* authority to take that step as to state environmental policies given states' exclusive jurisdiction to regulate "facilities used for the generation of electric energy."[112] Indeed, PJM's position here would also appear to require an exemption for units receiving federally mandated cost-of-service recovery under Section 202(c) of the FPA, despite the obvious effects such contracts would have on auction results. That too would be arbitrary.

Here is the bottom line: Myriad resources have long received support via subsidy payments, as reflected in Figure 3.

Figure 3: RPM Capacity Resources Receiving Long-Standing Support (UCAP GW)



Notes: Renewables includes all RPM-cleared wind, solar, and wood biomass resources. Distributed solar is PJM forecast for 2020 per the 2017 Load Forecast. Energy efficiency includes all RPM-cleared energy-efficiency resources, virtually all of which receives rebates or other state support connected with state energy-efficiency programs. Energy Efficiency includes past energy-efficiency resources that are now incorporated into load forecast. Small-medium regulated coal includes all regulated coal units with capacity less than 600 MW.

[112] 16 U.S.C. § 824(b)(1).

This data is conservative, as it excludes many tax credits and development incentives outlined above. But conservatively estimated, the resources *already* receiving support dwarfs the capacity affected by the ZEC Program that PJM targets. PJM bears the burden to show that its proposed tariff is just and reasonable. PJM cannot make that showing when its proposals target pro-efficiency state environmental programs affecting 1.4 GW, leaving untouched myriad other interventions affecting more than ten times that amount that yield just as much "material price … effect," and many of which make the Commission's markets less efficient.

III. It Is Not Just And Reasonable To Alter Capacity Rules To Increase Capacity Prices When There Remains Significant Over-Supply And Robust New Entry.

PJM's proposals are not just and reasonable, but if a dearth of new entry jeopardized resource adequacy, they would at least be understandable. The markets, however, are working well. Prices are low (benefitting consumers), yet new entry is robust (confirming that the markets continue to attract investment). In such circumstances, it would violate the Commission's statutory mandate to raise prices via administrative action, as PJM's proposals would do.

A. The Commission Should Not Change Capacity Market Rules To Combat Low Prices At A Time Of Plentiful Supply.

The Commission's mandate under the FPA is "to encourage the orderly development of plentiful supplies of electricity … at reasonable prices."[113] Absent concrete evidence of a danger to that mandate, or of the exercise of buyer-side market power, the Commission has declined to apply mitigation.[114] Today, the wholesale markets are providing plentiful supplies at low prices.

[113] *PJM Interconnection, L.L.C.*, 155 FERC ¶ 61,157, at 30 n.39 (2016) (quoting *Pub. Utilities Comm'n of Cal. v. FERC*, 367 F.3d 925, 929 (D.C. Cir. 2004)).

[114] *E.g.*, *ISO New England Inc.*, 158 FERC ¶ 61,138, at P 28 (2017) ("Generators have not shown that the renewables exemption will, in fact, suppress prices over time such that the capacity market is unable to perform its function of attracting and retaining sufficient capacity to maintain reliability … at a just and reasonable price."); *id.* P 58 ("[W]e are not persuaded that there is substantial evidence that FCM capacity prices will be so low as to prevent sufficient entry into the FCM to meet ISO-NE's reliability targets, on average over time. Thus, we consider Generators' assertions that the renewables exemption will result in an inappropriate wealth transfer — i.e. that Generators will be effectively paying for the cost of the renewable resources — to be a misunderstanding of the purpose of the FCM. It

And while the CASPR Order indicated that part of the Commission places weight on whether there is a "level of investor confidence" that ensures that supplies remain plentiful going forward,[115] the markets are succeeding in that respect too.

PJM's filing relies on theoretical claims about how state environmental policies make "investment … less sustainable over time."[116] Those claims should sound familiar: The Commission has heard them since Illinois and New York passed ZEC programs in 2016. The Commission was told that Illinois' legislation posed an "existential threat,"[117] and was "poised to drop onto the RPM market like an anvil onto a woeful coyote beginning with the Base Residual Auction for … 2020/2021."[118] It heard the same thing about New York's ZEC Program and the markets of the New York Independent System Operator, Inc. ("NYISO").[119]

Today, that rhetoric is testable. The coyote is alive and well. New York's ZEC Program was adopted nearly two years ago, and Illinois' is more than a year old, including spanning a cycle of PJM's Base Residual Auction. These programs have thus been understood and factored into both markets for some time. And if they were undermining resource adequacy or investor confidence, the data would show it. Yet PJM presents no evidence of any adverse market impacts. And the *real* data show the opposite. In both regions, capacity is plentiful. In PJM's most recent Base Residual Auction, 165.1 GW of unforced capacity cleared.[120] Including commitments under

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is the purpose of the FCM to attract and retain sufficient capacity to meet ISO-NE's reliability targets on average over time, at least cost to customers, given the renewable generation that will enter as a result of state programs.").

[115] CASPR Order at P 21.

[116] PJM Filing at 34.

[117] Motion to Amend, and Amendment to, Complaint and Request for Expedited Action on Amended Complaint at 2, 3, *Calpine Corp. v. PJM Interconnection, L.L.C.*, Docket No. EL16-49-000 (Jan. 9, 2017) ("Calpine Mot. to Amend"); Motion to Lodge and Request for Expedited Action on Amended Complaint at 2-3, *Calpine Corp. v. PJM Interconnection, L.L.C.*, Docket No. EL16-49-000 (Aug. 30, 2017).

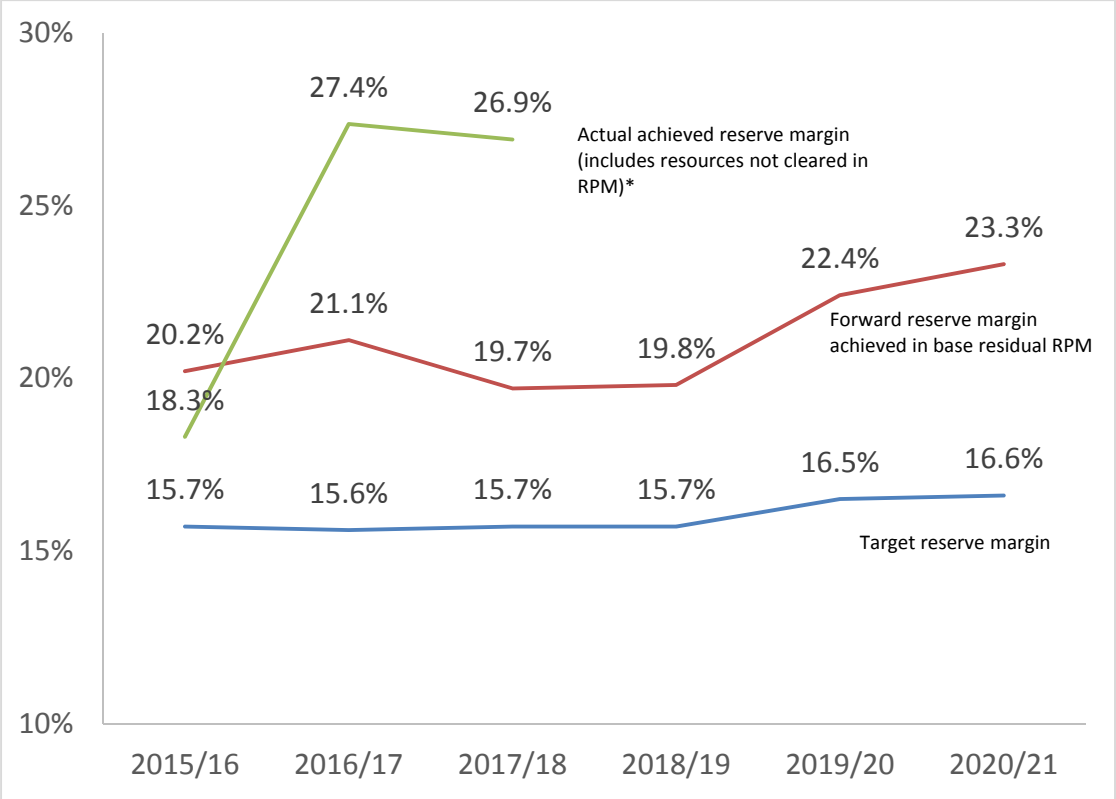
[118] Calpine Mot. to Amend at 2-3.

[119] Request for Expedited Action at 13-14, *Independent Power Producers of New York, Inc. v. New York Independent System Operator, Inc.*, Docket No. EL13-62-002 (Jan. 9, 2017).

[120] *See* PJM, 2020/2021 RPM Base Residual Auction Results 1 (May 23, 2017), http://pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2020-2021-base-residual-auction-report.ashx.

Fixed Resource Requirement plans, PJM's reserve margin is 23.3%, or 6.7% higher than the target.[121] The achieved margin, which includes resources that did not clear in the Base Residual Auction, is even higher, at 26.9% in 2017/18. That pattern is stable, as the following figure shows:

Figure 4: PJM Achieved Versus Target Reserve Margins



Note: Data are per NERC summer reliability assessments.

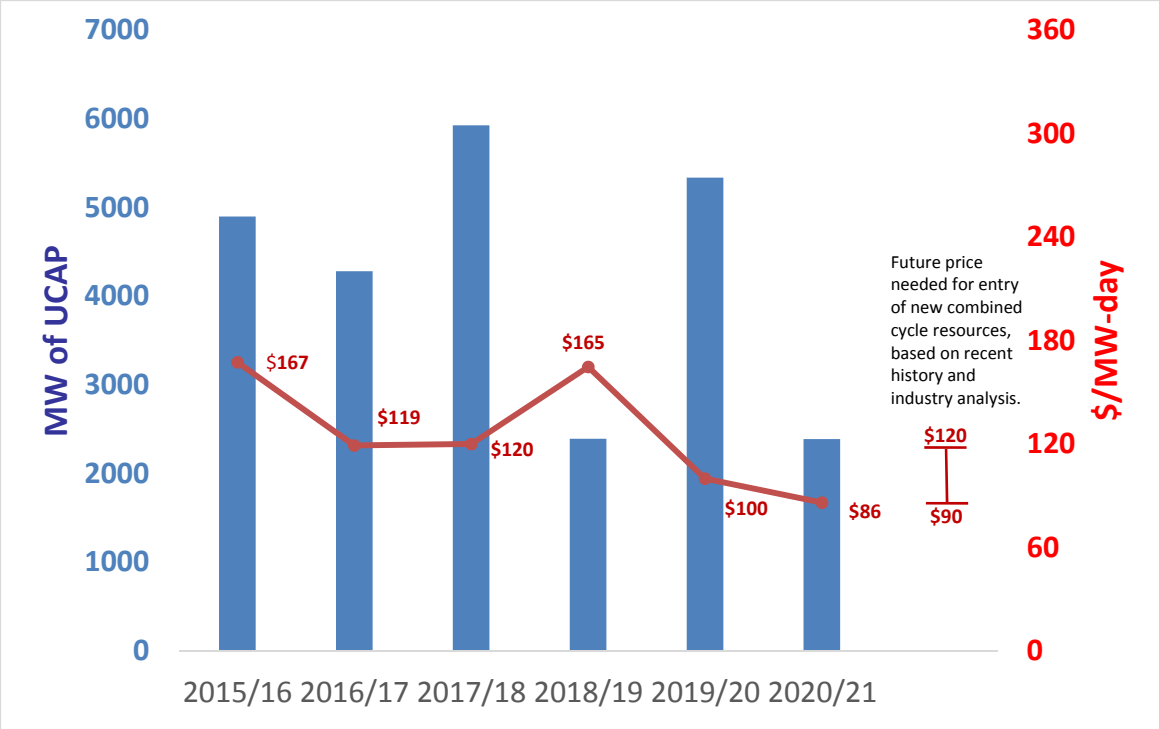
PJM contends that state environmental programs will lead investors to distrust market price signals, and they will refuse to invest. But for two decades, states have been implementing REC programs, as well as many other programs that impact wholesale market profits, including demand response and energy efficiency programs that reduce demand, net metering programs, and subsidies for storage. Sophisticated investors have always considered these types of regulatory risks. Today's risks are nothing new. Against this backdrop, it is not just and reasonable to revise

[121] *See id.*

market rules for the purpose of increasing prices without evidence that supply is tightening or investors are unwilling to invest even as prices approach or exceed Net CONE.

Even at today's low prices, moreover, new gas units are regularly entering both markets. The most recent Base Residual Auction attracted 2,350 MW of new combined-cycle gas resources, despite clearing prices between approximately 26% and 66% of PJM's Net Cost of New Entry ("Net CONE").[122] Thus, the capacity market is clearing enough new and existing resources to more than satisfy the reserve margin, at prices well below Net CONE. That has been true for years. In the last six Base Residual Auctions, at least 2 GW of new generation (often 4-5 GW) has cleared:

Figure 5: New Build Capacity Cleared And Clearing Prices In PJM Base Residual Auction, 2015-16 – 2021/21

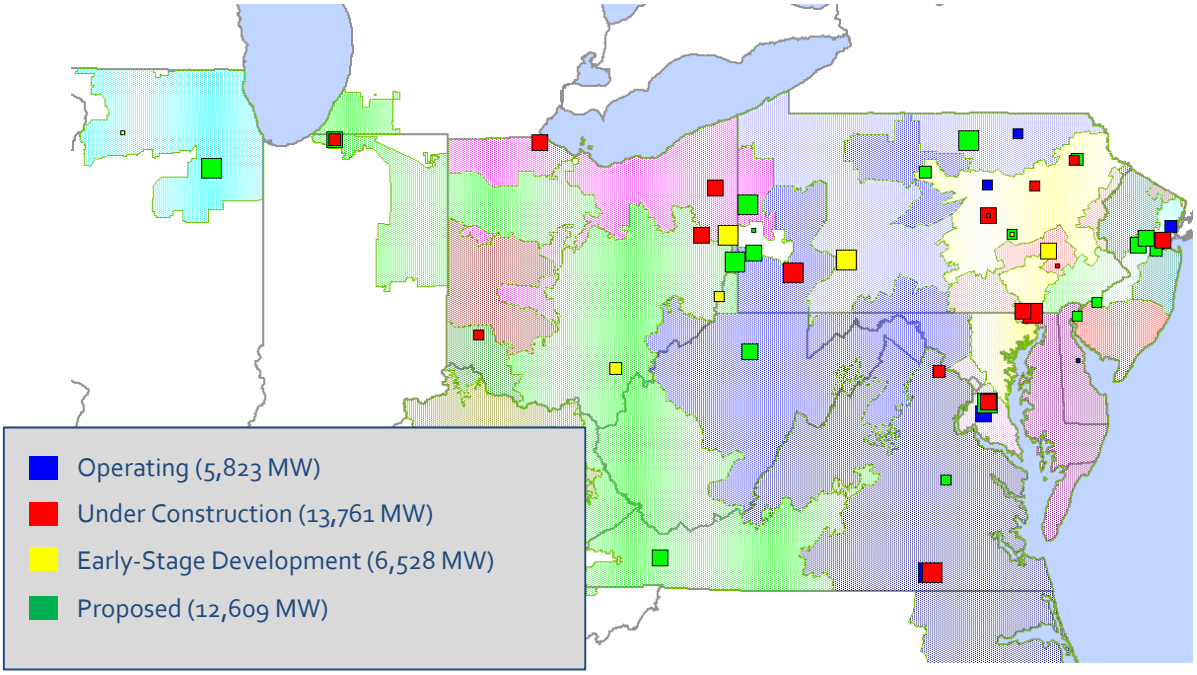


Note: Includes all RTO and MAAC capacity. New build clearing price is higher of RTO and MAAC. Excludes EMAAC new entrant capacity in years where EMAAC price separated and cleared higher than MAAC price. Does not include uprates.
Source: PJM Interconnection Base Residual Auction Reports, various years. http://www.pjm.com/markets-and-operations/rpm.aspx.

[122] *Id.* Thus, the facts refute the assertion made at the Technical Conference that new investments are not being made.

To the extent that the pace of new entry is slowing, that is because the market is responding to oversupply. Nevertheless, looking forward, there are almost 40 GW of recently entered or potential near-term entrant gas combined-cycle plants spread across PJM—25% of the market:

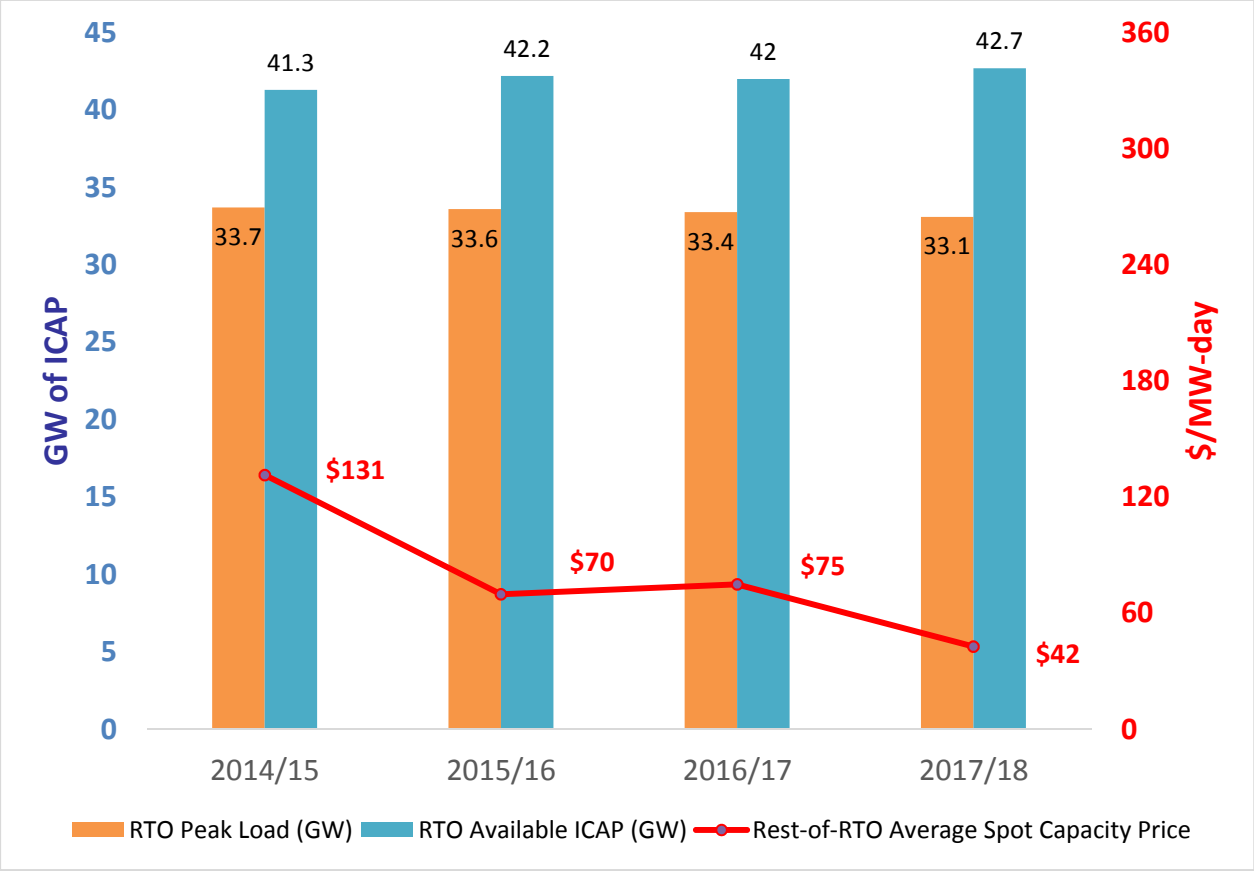
Figure 6: The 40 GW Of Recently Entered Or Potential Near-Term Entrant Gas Combined-Cycle Plants In PJM



Note: Box size denotes relative size of each unit in net summer capacity.

NYISO's story is similar. While new entry has not taken place at the same pace, reserve margins are even higher—25.6% in 2015/16, 26.0% in 2016/17, and 29.1% in 2017/18—at lower clearing prices of around $42 per MW/day. If new entry is needed, NYISO would likely see substantial new entry at modest prices. Even at current prices, New York will add two new combined-cycle gas plants, including the 1,100 MW Cricket Valley plant, over the next few years. There is no resource adequacy issue, as the following figure underscores:

Figure 7: NYISO Reserve Margins And Capacity Prices, 2014/15 – 2017/18



Source: New York ISO ICAP Market Reports, July 2014 through April 2018.

There is no reason to doubt that these trends will continue. PJM's markets are *designed* to maintain equilibrium, and safeguard resource adequacy, across a broad range of conditions. For example, if state programs reduce capacity prices, but tightening supply indicates that new entry is needed, prices will rise, and the downward sloping demand curve will ensure that the capacity price adjusts to reflect the costs of the generators that are necessary for resource adequacy.[123] In these circumstances, without any concrete evidence of a threat to reliability or investor confidence resulting from state environmental programs, it is not just or reasonable to approve tariff changes designed to increase prices for certain resources.

[123] *Capacity Markets and Externalities* at 18; *see* Willig Decl. ¶ 46.

B. The Commission Should Not Expand Capacity Market Mitigation Beyond The Purpose For Which It Was Adopted—Combatting Buyer-Side Market Power.

On the present record, it is not just and reasonable to embark on the two unprecedented expansions to buyer-side capacity market mitigation sought in PJM's filing. First, PJM's filing would expand such mitigation beyond its original purpose: avoiding buyer-side market power. Second, it would sweep in a vast universe of additional resources by mitigating existing resources.

Expansion beyond buyer-side market power. Combatting buyer-side market power is undoubtedly a legitimate concern under the FPA. Rates are "unjust and unreasonable … in violation of section 205(a) of the FPA" when they are "due to the exercise of market power."[124] The Commission narrowly crafted PJM's MOPR to address the concern that "net buyers might have an incentive to depress market clearing prices by offering … at less than a competitive level," and it found that the MOPR was "a reasonable method of assuring that net buyers do not exercise monopsony power."[125] The Commission has continued to describe the "very purpose"[126] and the "underlying objective[]" of "PJM's MOPR" as "to prevent the exercise of buyer-side market power."[127] Likewise, when the Commission has weighed modifications to PJM's MOPR, it has assessed whether those modifications are necessary to address buyer-side market power.[128]

[124] *Portland Gen. Exch., Inc.*, 51 FERC ¶ 61,108, 61,243-44 (1990).
[125] *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331, at PP 103, 104 (2006).
[126] *PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,022, at P 104 (2011).
[127] *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 20 (2013) (describing "PJM's MOPR [as] a mechanism that seeks to prevent the exercise of buyer-side market power").
[128] *See, e.g.*, *PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,022, at P 70 (2011) (revised threshold "reasonabl[y] … protect[s] against unreasonable exercises of market power"); *id.* at P 88 (amending rule that was "ineffective at protecting against buyer market power"); *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 25 (2013) (self-supply exemption approved because it "will operate to identify those self-supply entities lacking the incentive to exercise buyer-side market power"); *id.* at P 109 (declining to "categorially exempt self-supply" because a "blanket exemption" would allow an "unacceptable opportunity to exercise buyer market power"); *id.* at P 56 (approving competitive entry exemption because qualifying entities "do[] not raise buyer-side market power concerns"); *id.* at P 166 (limiting MOPR to gas-fired generation as the "most likely" to "be used to exercise market power").

Under this precedent, PJM's filing fails at the threshold. PJM does not allege that buyers are exercising market power, or that its proposals are designed to prevent the exercise of buyer-side market power. Instead, PJM seeks to transform mitigation rules into a roving tool to address any "material price … effect in the wholesale capacity market" from external influences outside the market. But such external influences are omnipresent and inescapable, as PJM elsewhere acknowledges.[129] And as PJM's incoherent proposals show, the project of "draw[ing] … lines between actionable and un-actionable" influences[130] is fraught. Under present conditions, it is not just and reasonable to embark on that difficult task by unmooring buyer-side mitigation from its foundations.[131]

Exelon recognizes that, in ISO-New England, the CASPR Order applied mitigation rules for a broader purpose. But the Commission stressed that its "acceptance of th[at] proposal" was "only … a finding … on the record before" it.[132] On the record *here*, PJM has failed to identify either sufficient justification for departing from the existing scope of PJM's mitigation rules, or a just and reasonable proposal to implement some broader purpose.

Expansion to existing resources. The CASPR Order only underscores the second unprecedented change sought by PJM's filing. Buyer-side mitigation has *always* been limited to new resources,[133] including in CASPR.[134] That is for good reason. If the intent is to exercise buyer-side market power by lowering prices, the best way to do it is with new resources that can

[129] PJM Filing at 15-16, 34-35.
[130] *Id.* at 15.
[131] *See* Willig Decl. ¶¶ 13(a)-(b); 23-24.
[132] CASPR Order at P 26.
[133] *PJM Interconnection, L.L.C.*, 153 FERC ¶ 61,066, at P 3 (2015) ("PJM's MOPR is designed to protect against buyer-side market power by setting a price floor, i.e., a minimum bid, and by requiring that all *new*, non-exempted resources bid at that floor" (emphasis added)); *see also, e.g.*, *id.* at P 44 (approving self-supply exemption because it adequately addresses "the price effects attributable to uneconomic *new* self-supply" (emphasis added)).
[134] CASPR Order at P 8.

be built quickly and have high capacity factors—specifically, new gas-fired plants. That is why the Commission found that PJM had properly limited its MOPR to new "gas-fired resources" as "those resources most likely to raise price suppression concerns," which the Commission determined "appropriately balanc[ed] the need for mitigation of buyer-side market power against the risk of over-mitigation."[135]

By contrast, existing resources are not a promising tool for exercising buyer-side market power, and MOPR's remedy does not fit. Existing resources already are participating in the market, and their capacity has contributed to prices the Commission has found just and reasonable. When PJM proposed extending the mitigation period to three years, the Commission rejected that request because, "given the market's demonstration of its need for the resource," there was "no reasonable basis for continuing to apply the MOPR."[136] Likewise, the mitigation remedy—resetting bids to Net CONE * B—does not fit existing resources. Their costs are largely sunk. Thus, as the Commission explained, this remedy "could lead to over-mitigation by requiring a commercially operational resource to bid at an offer floor … substantially above its going-forward costs."[137] These principles apply with particular force to nuclear resources, which have supplied capacity for decades and predate the capacity markets. Their cost of construction has already been sunk, and they have been licensed by the Nuclear Regulatory Commission ("NRC") to operate for years. The Commission should reject the notion that a nuclear unit's continued supply of capacity through the end of its NRC license somehow distorts the capacity market, and should maintain its longstanding and well-grounded limitation of buyer-side mitigation to new entrants only.

[135] *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 26 (2013).
[136] *Id.* at P 211.
[137] *Id.* at P 212; *see* Willig Decl. ¶ 13(g)(iii).

IV. MOPR-Ex Violates Each Of The Core Principles That Should Guide Commission Decisionmaking.

As explained above, Exelon does not believe that either proposal is just and reasonable. But if the Commission deems some reform warranted, it should adhere to five principles grounded in Commission precedent.

First, the Commission should allow the mix of resources selected by the capacity market to be affected by state programs that address environmental externalities. So long as the Commission keeps its policies "fuel neutral,"[138] it must accommodate actions of other regulators addressing the reality that fuels have different environmental impacts. If the Commission's markets were designed to *prevent* states from influencing the mix of resources selected in the auction, and if the Commission does not itself step into the gap and adopt a carbon price, then the Commission's markets would not fulfill their "first principles" of "facilitat[ing] robust competition" and "select[ing] … the least-cost set of resources."[139] Polluting plants would receive an implied subsidy, and the resources selected would not be the set that minimizes social costs.

Second, if the Commission decides to accept market rule changes, it should do so in the spirit of cooperative federalism and accommodate state choices as much as possible. Wherever possible, the Commission must "fulfill [its] jurisdictional responsibilities while also respecting the states' traditional role."[140]

Third, the Commission should avoid putting customers in the position of having to over-procure capacity via market rules that prevent state-supported resources from clearing. As the Commission has recognized, while the harsh medicine of the MOPR may be effective and

[138] *Id.* at P 26.
[139] CASPR Order at P 21.
[140] *California Indep. Sys. Operator Corp.*, 116 FERC ¶ 61,274, at P 1112 (2006).

appropriate to deter against exercises of buyer-side market power, that remedy is neither effective nor appropriate in response to environmental policies that states are committed to pursuing.[141] Mitigating state-supported resources only leads to the retention of unneeded capacity.

Fourth, the Commission should treat compensation from environmental programs in an even-handed and nondiscriminatory manner. Distinctions in treatment must reflect differences in how policies affect wholesale markets. Otherwise, the Commission is inappropriately sitting in judgment on state policies with no basis in the FPA. Likewise, the Commission should not distinguish between federal and state policies when effects on wholesale markets are identical.

Fifth, the Commission should avoid taking actions in capacity markets that will exacerbate existing price suppression in energy markets. There is no justification for embarking on a purported cure that may well be worse than the disease.

Option B's MOPR-Ex violates each of these principles. First, it selects the *wrong* resources by favoring inefficient polluting resources over clean resources whose costs, all things considered, are lower. Second, it treats state environmental programs as hostile to, rather than complementary of, the Commission's markets. Third, MOPR-Ex selects *too many* resources by ignoring the capacity that will be provided by state-supported resources whose mitigated bids do not allow them to clear. Fourth, even as Option B purports to aim at protecting the market from influences of state policies, it is riddled with arbitrary exceptions. Far from being fuel-neutral, it is gerrymandered to target nuclear and offshore wind. Fifth, MOPR-Ex will suppress energy market prices.

MOPR Ex's flaws are no secret to its sponsors, PJM and its IMM, which developed MOPR-Ex. Just a few months ago, PJM's management emphasized it could not "recommend[]" the "MOPR-Ex … approach to the PJM Board," having concluded that it "is not sustainable and does

[141] CASPR Order at P 45.

not strike an appropriate balance between legitimate state interests and wholesale market integrity."[142] The IMM has long pushed for an expanded MOPR. But even the IMM understands that MOPR-Ex's distinctions are arbitrary: On April 11, 2016 the IMM filed testimony in support of an expanded MOPR, supposedly based on the IMM's own economic analysis. That proposal would have expanded the MOPR broadly—including to several categories of resources exempted from MOPR-Ex, such as qualifying facilities, public power resources that do not meet the requirements for the self-supply exemption, and state RPS programs (aside from REC payments).[143] MOPR-Ex's newfound exemptions do not stem from any *change* in the IMM's analysis. They are politics. A substantial majority of PJM stakeholders supported the status quo over the IMM's proposal[144]—until the IMM log-rolled powerful voting blocs with exemptions for public power, existing RPS programs, and qualifying facilities. Meanwhile, fossil-fuel generators needed no inducement to support a proposal that harms their cleaner competitors.

No deference should be afforded to the failed stakeholder vote on MOPR-Ex. The proposal did not receive the required supermajority support, and the economically unsound and politically motivated exemptions doled out by the IMM were essential to garnering even the modest level of support the proposal obtained.[145] Regardless, stakeholder votes cannot render a proposal just and reasonable. That determination remains with the Commission.

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[142] Letter from Andrew L. Ott, President and CEO, PJM (Jan. 16, 2018), https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20180116-pjm-president-and-ceo-letter-regarding-capacity-market-repricing-proposal.ashx?la=en.

[143] Comments of the Independent Market Monitor for PJM at 8, Docket No. EL16-49-000 (Apr. 11, 2016).

[144] PJM, CCPPSTF Vote Results at 5 (Nov. 21, 2017), http://www.pjm.com/-/media/committees-groups/task-forces/ccppstf/20171121/20171121-ccppstf-vote-results.ashx.

[145] *Sw. Power Pool, Inc.*, 152 FERC ¶ 61,226, at PP 111, 116 (2015) (rejecting Section 205 filing despite "degree of deference [provided] to RTO stakeholder processes," and noting argument of PJM Market Monitor that "no deference to SPP stakeholders is appropriate in this case" given conflicts of interest among stakeholders); *see PJM Interconnection, L.L.C.*, 162 FERC ¶ 61,139, at P 136 n.244 (2018).

A. Option B's MOPR-Ex Would Result In An Inefficient Selection Of Resources.

PJM admits that the "theoretical ideal market approach" would account for externalities via, for example, "a carbon emissions objective embedded in the wholesale market."[146] Judged by those principles, Option A's Capacity Repricing improperly adjusts prices in its second-stage auction and treats payments under state environmental programs as subject to mitigation. But Capacity Repricing at least selects the correct resources. MOPR-Ex is far worse.[147] It artificially raises bids of clean resources receiving payments for environmental attributes—resources that, accounting for externalities, are economic.[148] So instead of clearing these economic clean resources, the market clears marginal fossil-fuel-fired resources that, when pollution costs are accounted for, are not economic.[149] In so doing, MOPR-Ex contravenes the mandate that market rules should provide "price signals that guide … orderly entry and exit" to "the selection of the least-cost set of resources."[150] Indeed, approving MOPR-Ex would require the Commission to disavow all of its precedent accommodating state environmental programs, from its CAISO order to the just-issued CASPR Order.[151] And this departure from Commission precedent would be especially harmful as to the nuclear plants MOPR-Ex targets. If MOPR-Ex forces them to retire, they are gone forever. Yet there is broad agreement that, over the medium term, markets should evolve to account for clean generation's environmental benefits.[152] There is no justification for

[146] PJM Filing at 54.
[147] *Id.* at 54-55.
[148] Willig Decl. ¶ 71.
[149] *Id.*
[150] CASPR Order at P 26.
[151] *Supra* at 18-22.
[152] *See, e.g.*, Post-Technical Conference Comments of Calpine Corp. at 4, *State Policies and Wholesale Markets*, Docket No. AD17-11-000 (June 22, 2017); Post-Technical Conference Comments of Dynegy Inc. at 4, *State Policies and Wholesale Markets*, Docket No. AD17-11-000 (June 22, 2017); Post-Technical Conference Comments of Electric Power Supply Association at 9, *State Policies and Wholesale Markets*, Docket No. AD17-11-000 (June 22, 2017); Post-Technical Conference Comments of NRG Energy, Inc. at 4, *State Policies and Wholesale Markets*, Docket No. AD17-11-000 (June 22, 2017); *see generally* Post-Technical Conference Reply Comments of Exelon Corp. at 4 & n.9, *State Policies and Wholesale Markets*, Docket No. AD17-11-000 (July 13, 2017) (citing additional comments in support).

enacting, in the short term, rules that intentionally lead PJM's resource mix away from the direction that a broad swath of stakeholders—including several fossil-fuel generators that Exelon expects to support MOPR-Ex—believe it should head.

B. MOPR-Ex Is Inconsistent With The Accommodative And Cooperative Approach Endorsed In The CASPR Order.

MOPR-Ex also violates the prime directive of the FPA's scheme of cooperative federalism—that the Commission must, when possible, "fulfill [its] jurisdictional responsibilities while also respecting the states' traditional role."[153] MOPR-Ex is expressly "punitive" and "mitigative in nature."[154] But even if the Commission determines that action is needed to address the effects of state environmental programs on capacity prices, the Commission should take such action in the spirit of cooperative federalism—seeking to design its markets to ensure just and reasonable prices while complementing, rather than countermanding or punishing, such state programs. Indeed, the Commission has *already* approved, in CASPR, a model that addresses state programs' effects on wholesale markets in a spirit of cooperative federalism. As explained above, CASPR promised "to better accommodate" state environmental policies in wholesale markets, and the Commission approved CASPR only after it concluded that CASPR would "provide[] a reasonable opportunity to accommodate state sponsored resources."[155] With the more accommodating model of Capacity Repricing available, it is not just and reasonable to adopt an approach that goes out of its way to frustrate state policy choices.

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[153] *California Indep. Sys. Operator Corp.*, 116 FERC ¶ 61,274, at P 1112 (2006); *see Connecticut Light & Power Co. v. Fed. Power Comm'n*, 324 U.S. 515, 526 (1945) (Commission authority is "'so drawn as to be a complement to and in no sense a usurpation of State regulatory authority,'" and Commission is obligated "'to receive and consider the views of State[s]'" (quoting legislative history of FPA)); *Panhandle E. Pipe Line Co. v. Pub. Serv. Comm'n of Ind.*, 332 U.S. 507, 517 (1947) (Commission authority has "no purpose or effect to cut down state power"; rather, its "primary purpose [i]s to aid in making state regulation effective, by adding the weight of federal regulation to supplement and reinforce it").

[154] PJM Filing at 53, 96.

[155] CASPR Order at P 102.

C. MOPR-Ex Would Over-Procure Capacity And Distort Energy Prices.

Option B is also far worse than Option A because it yields *too much* capacity. The Commission has recognized that when states are pursuing clean energy policies, they will continue to support clean generation even if market rules preclude that generation from clearing. Thus, the CASPR Order observed that such capacity "will be developed by the operation of state environmental and clean energy mandates, whether that capacity clears the [market] or not."[156] In this respect, mitigating clean generation policies differs from mitigating exercises of buyer-side market power. If a buyer's goal is to suppress capacity prices by introducing new capacity, then applying the MOPR means the anti-competitive capacity will not get built *at all*. Building that capacity would be irrational because it cannot further the buyer's price-suppressive goals.

Clean energy is different. As the Commission has recognized, states are likely to continue promoting clean generation even if it cannot clear—because even if the capacity does not clear, it still provides environmental benefits. Thus, as PJM admits, the clean generation will continue to be built and to operate.[157] That means applying the MOPR is likely to "send an incorrect signal to construct new capacity that is not needed."[158] State-supported clean generation will go forward, yet the wholesale markets—ignoring that capacity—will signal that further capacity is needed. The Commission has always acted to avoid that result, either by exempting clean generation policies from mitigation,[159] or by ensuring that any mitigation provides a pathway to accommodate clean generation policies and avoid over-procurement, as in CASPR. Capacity Repricing, despite

[156] *Id.* at P 45.
[157] PJM Filing at 56 ("In many cases, loss of capacity revenues likely will not induce retirement of the subsidized resource, and loads will be paying for more resources than it needs."); *see* Willig Decl. ¶¶ 72-73.
[158] *ISO New England Inc.*, 158 FERC ¶ 61,138, at P 9 (2017).
[159] *Id.* at P 48 (exemption "for state-subsidized resources … so that customers may avoid having to pay for duplicative capacity").

its flaws, also avoids these problems.[160] MOPR-Ex runs headlong into them. As PJM admits, MOPR-Ex is likely to "disqualify[]" clean generators "from clearing as capacity, and will clear other resources to meet capacity needs."[161] As a result, several years hence, the PJM region will have far more capacity than it needs and customers will pay more to support the excess.[162]

That excess capacity will yield a second problem: MOPR-Ex is likely to "enable[e] price suppression in the wholesale energy and ancillary service markets."[163] Because PJM's system will include both the clean generation that the capacity markets ignore, and the replacement generation that the capacity markets acknowledge, there will be "greater supply in the energy market than economic conditions … justify," which will—in turn—"suppress prices."[164]

PJM's failure to grapple with this energy market suppression is reason enough to reject MOPR-Ex. While MOPR-Ex purports to address "suppress[ed] capacity market clearing prices,"[165] PJM does not even attempt to quantify MOPR-Ex's energy market price suppression. As a result, the problem that MOPR-Ex creates may be even worse than the supposed problem that it addresses. Indeed, adopting MOPR-Ex would leave the Commission's work half unfinished: It would be guaranteeing itself the need to take up a new set of energy market issues in short order, but without any indication of how PJM will propose to *solve* the problems it has created.

Risking new and unquantified price suppression in the energy market is especially wrongheaded because energy market price suppression is *already* a big problem. As PJM explained a few months ago, "under the current market rules, inflexible units are not permitted to

[160] PJM Filing at 56 ("Capacity Repricing avoids … duplication, because it allows state-selected resources to commit as capacity….").
[161] *Id.*
[162] *Id.*
[163] *Id.* at 57.
[164] *Id.*; *see* Willig Decl. ¶ 74.
[165] PJM Filing at 17.

set price," even when they are "needed to serve demand."[166] When that occurs, PJM's locational marginal price "does not accurately reflect the true incremental cost to serve load," and "energy and reserve prices" are "suppress[ed]."[167] PJM cannot defensibly exacerbate these problems when it admittedly has no idea whether it is creating a bigger problem than it is solving.

Price suppression in energy markets has a particularly pernicious effect on baseload resources that earn most of their revenue in the energy market. Thus, rather than creating a disincentive for additional state support programs, as MOPR-Ex's proponents suggest, it may *exacerbate* economic pressure on baseload nuclear resources, which in turn may spur additional action from states to avoid the environmental consequences of widespread nuclear retirements.

D. MOPR-Ex's Exemptions Draw Arbitrary Distinctions Among State Programs And Are Otherwise Unlawful.

Even if one accepted MOPR-Ex's incorrect premise that capacity markets should be "protected" from the influence of some state environmental policies, the proposal is indefensible as a matter of market design. It is full of discriminatory exemptions betraying that it is a political logroll, not a just and reasonable market reform. A more apt name would be "MOPR-Exemption." MOPR-Ex's exemptions are also unlawful in numerous ways.

1. The RPS Exemption Is Unduly Discriminatory And Not Just And Reasonable.

MOPR-Ex exempts from its definition of Capacity Resources with Actionable Subsidies any resources qualifying for an "RPS Exemption." The exemption "grandfathers" renewable resources procured or subject to an RFP issued before December 31, 2018, and going forward, it exempts any renewable resources procured under an RPS that is what MOPR-Ex calls

[166] PJM, *Proposed Enhancements to Energy Price Formation* at 2 (Nov. 15, 2017), http://www.pjm.com/-/media/library/reports-notices/special-reports/20171115-proposed-enhancements-to-energy-price-formation.ashx ("PJM Proposed Enhancements"); *see* Comments and Responses of PJM Interconnection, L.L.C., at 74-75, Case No. AD-18-7-000 (Mar. 9, 2018) (noting that resiliency problems may be exacerbated by suppressed energy market prices, and that "because [certain units] are not able to set clearing prices, those clearing prices are artificially low[]").
[167] PJM Proposed Enhancements at 2.

"competitive and non-discriminatory"—which MOPR-Ex defines to *forbid* discrimination against "renewable Capacity Resources," but to *permit* discrimination "restricting imports from other states," and to *require* discrimination against "offshore wind," and "coal, natural gas, or nuclear thermal resources."[168] The intent is to "accommodate most state RPS programs," but to mitigate other state environmental policies based on disfavored technologies or procurement processes. For two reasons, this RPS Exemption is unduly discriminatory, and not just and reasonable.

First, under MOPR-Ex's rationale, the RPS Exemption is untenable. MOPR-Ex purports to target "material state subsidies" with "price suppressive effects … on … clearing prices."[169] RPS standards are exactly this.[170] Indeed, PJM *admits* as much: It concedes that the RPS Exemption is *not* based on a judgment that "renewable generation resources … do not suppress prices."[171] That concession was necessary because PJM's filing is replete with evidence that these resources *do* affect prices, and PJM's filing identifies them as "subsidies of concern."[172] PJM's expert, Dr. Anthony Giacomoni, explains that "RPS/REC programs contribute significantly to the installation of renewable resource capacity," and "bring forth more renewable resources … than would have developed absent the programs."[173] Today, RPS requirements require "4,969 MWs of 'around-the-clock' capacity … located and metered in the PJM Region," which is expected to grow to "8,000 MWs by 2025."[174] Indeed, the capacity price effects of renewables—most of which receive support under RPS programs qualifying for the RPS Exemption—are significant. As the below table shows, prices across PJM are 4.1% lower than they would be if renewables had to bid without the benefit of subsidies, and prices in the ComEd and EMAAC zones are 6.5% lower.

[168] PJM Filing at 52, 112-13 & n.291; Proposed PJM Tariff, Attachment DD § 5.14(h)(10)(b)(ii) (Option B).
[169] *Id.* at 102.
[170] Willig Decl. ¶¶ 78-79.
[171] PJM Filing at 114.
[172] *Id.* at 25.
[173] Giacomoni Aff. ¶¶ 21, 23.
[174] *Id.* ¶ 29.

Table 2: Estimated Impact Of Subsidized Renewable Resources On PJM Capacity Prices In 2020/21 Base Residual Auction

Estimated Impact of Subsidized Renewables on PJM Capacity Prices in 2020/21 Base Residual Auction

	Cleared Renewable UCAP (MW)				2020/21	Estimated BRA Price if Renewables	Price Suppression
Region	Wind	Solar	Biomass	Total	BRA Price ($/MWD)	Bid at Net CONE x B ($/MWD)	Due to Renewables (%)
RTO	412	67	256	735	76.53	79.84	-4.1%
ComEd	356	1	22	379	188.12	201.09	-6.5%
MAAC	120	1	147	268	86.04	88.84	-3.2%
EMAAC	0	56	152	207	187.87	201.03	-6.5%
	888	125	576	1589			

Sources: Cleared renewable UCAP per PJM 2020/21 BRA results. Regional renewable shares estimate based on 2020/21 resource model. Biomass assumed to include wood, other gas, and other liquid resource categories. Price impact of renewables estimated based on PJM 2020/21 RPM Base Residual Auction sensitivity analysis.

Taking MOPR-Ex's stated purpose as its word, the RPS Exemption is untenable. When the Commission approves exemptions, it does so because the resources that qualify do not have the characteristics deemed to warrant mitigation in the first place.[175] Never has the Commission found that a class of resources has the characteristics deemed to warrant mitigation, yet exempted them anyway. But that is what MOPR-Ex does. The reason, presumably, is that some stakeholders regard the MOPR-Ex's core policy choice—that state environmental policies should be mitigated—as unacceptable when applied in a principled manner, but were willing to go along so long as a one-off exemption was made for politically popular RPS programs. Nor can the RPS Exemption be defended as an exercise in incrementalism that exempts programs *least likely* to affect price: The exemption's main trigger—whether a procurement process is "competitive and nondiscriminatory"—has nothing to do with whether a program is likely have significant effects.

While PJM justifies the RPS Exemption as reflecting "deference to [state] public policies,"[176] that deference only underscores the second reason that the RPS Exemption is

[175] For example, the Commission approved the self-supply exemption because PJM's existing MOPR "[wa]s a mechanism that seeks to prevent the exercise of buyer-side market power," and self-supply entities that qualify for the exemption lacked the ability and "the incentive to exercise buyer-side market power." *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at PP 20, 25 (2013).

[176] PJM Filing at 114.

arbitrary. MOPR-Ex's deference is unjustifiably selective. It awards an exemption *only* to the renewable/RPS model, excluding other state environmental policies regardless of whether the effects on capacity auctions are similar and even if the disfavored policies are more efficient. As Dr. Willig explains, the archetype of a well-designed environmental policy is one that limits payments to the externality being addressed. Illinois' ZEC Program follows that mandate, but there is no guarantee RPS programs will do so.[177] Yet MOPR-Ex exempts payments under RPS programs even if they are inefficiently high, while mitigating environmental programs that may be perfectly efficient. That is arbitrary and undue discrimination.

MOPR-Ex's RPS Exemption is especially egregious because it compels discrimination against non-renewable technologies that provide the same environmental benefits as renewable technologies.[178] The RPS Exemption provides that the "renewable characteristic" must be the "only screen for participation" and specifies that "renewable does not include coal, natural gas, or nuclear thermal resources."[179] So suppose that a state wishes to address the externalities of carbon emissions and recognizes that supporting nuclear power plants may be its most efficient solution—indeed, so efficient that it is concerned that other zero-emitting technologies, such as wind and solar, would not be able to compete head-to-head with nuclear in a zero-emission credit market open to all non-emitting technologies. The RPS Exemption not only would penalize the state for creating a nuclear-specific program in order to protect its support for wind and solar, but also would even penalize the state if it decided to instead impose a zero-carbon purchase obligation rather than create an RPS program. Doing so would result in the mitigation of any units receiving

[177] Willig Decl. ¶¶ 59, 82-87.
[178] *Id.* ¶ 86.
[179] Proposed PJM Tariff, Attachment DD § 5.14(h)(10)(b)(ii) (Option B). The RPS Exemption would also thus apparently require mitigation if states adopt carve-outs for particular renewable technologies, such as solar.

payments under the program, including renewable generators, because the "renewable characteristic" would not be the "only screen" for participation in the program.[180]

Similarly indefensible is the discrimination in the RPS Exemption's "grandfathering" provision.[181] That exemption purports to protect "seller expectations," and PJM defends it as a "reasonable transition" because "commitments were likely made based on RPM's longstanding practice of applying the MOPR to only gas-fired generation resources."[182] But non-renewable generators also have expectations at stake. The Quad Cities plant, for example, was procured under Illinois' ZEC Program at a time when PJM's MOPR only applied to gas-fired generation and had never applied to existing resources of *any* type. Expectations, to the extent they are a legitimate basis to exempt resources, must be respected consistently.

MOPR-Ex's selectivity violates not just sound economics, but the FPA's division of authority. As explained above, the FPA protects states' authority, as regulators of "facilities used for the generation of electric energy,"[183] to enact programs that address the environmental aspects of electricity generation, including selecting *which resources* benefit from state policies. The Commission, for its part, has some authority to tailor its market rules in light of state policies—but only to the extent that state policies "affect[] wholesale rates."[184] This principle forbids the Commission from approving market rules that attempt to micromanage the design of state policies regarding generation facilities, absent evidence of materially different effects on federal markets that result from different state policy designs.

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[180] *Id.*; *cf.* Ryan Randazzo, The Republic, *Arizona Regulator Proposes Adding Nuclear Power to Renewable-Energy Rules*, azcentral.com (Dec. 12, 2016), https://www.azcentral.com/story/money/business/energy/2016/12/12/arizona-regulator-proposes-adding-nuclear-power-renewable-energy-rules/95343412/.
[181] PJM Filing at 112.
[182] *Id.*
[183] 16 U.S.C. § 824(b)(1).
[184] *Conn. Dep't of Pub. Util. Control*, 569 F.3d at 481.

PJM does not genuinely defend MOPR-Ex's RPS Exemption. PJM says it "targets the mitigation action to the most recent state actions."[185] Vintage, however, is not a principled distinction, especially because RPS programs today are *larger* than they have ever been and growing every year.[186] Yet no matter how large they get, they will enjoy the RPS Exemption. PJM also avers that the RPS Exemption targets "state actions … focused on … specific units."[187] But that distinction also has no basis in economics. RPS standards supporting 4,969 MWs of renewable resources from dozens or hundreds of units may have similar effects as a program supporting a single 1,400 MW nuclear plant,[188] and the nuclear program may be more efficient.[189] The nuclear program's focus on "specific units" reflects only that nuclear plants are large and discrete. It has nothing to do with anything that should matter under PJM's market rules.

2. The RPS Exemption Delegates Excessive Discretion To Make Mitigation Decisions, In Violation Of Order No. 719.

In Order No. 719, the Commission admonished RTOs to ensure that "mitigation tariff provisions [are] as non-discretionary as possible,"[190] and it has stressed that "mitigation is supposed to be nondiscretionary in nature."[191] That is especially important where, as here, the IMM makes mitigation decisions. "[T]here is an inherent conflict of interest in an MMU conducting mitigation and also opining on the state of the market, the health of which may in part reflect the results of its mitigation."[192] Only nondiscretionary criteria temper that conflict;

[185] PJM Filing at 112.
[186] Giacomoni Aff. ¶ 30.
[187] PJM Filing at 112.
[188] Giacomoni Aff. ¶¶ 25, 30.
[189] Willig Decl. ¶ 59.
[190] *Wholesale Competition in Regions with Organized Elec. Markets*, 125 FERC ¶ 61,071, at P 379 (2008) ("Order No. 719").
[191] *Wholesale Competition in Regions with Organized Elec. Markets*, 122 FERC ¶ 61,167, at P 209 (2008).
[192] Order No. 719, at P 371.

discretion exacerbates it. Hence, the Commission has rejected a PJM proposal that would have "provid[ed] the IMM with unfettered discretion" to make mitigation decisions.[193]

The RPS Exemption violates these principles by conferring nearly unbounded discretion to determine whether an RPS program is "competitive and nondiscriminatory." While the exemption sets forth eight factors to provide a patina of objectivity, these factors merely cover for boundless discretion. For example, a program's requirements must be "fully objective and transparent."[194] Who decides what this means? The IMM, with nothing objective or transparent to limit its discretion. Likewise, the RPS exemption warns that programs must not include criteria that "could give preference to" new or existing resources, or "use indirect means" to discriminate based on vintage—with nothing to constrain the discretion in applying these vague terms.[195]

3. Under *NRG*, The RPS Exemption Cannot Be Severed, As PJM Suggests.

Rather than genuinely defend the RPS Exemption, PJM invites the Commission to sever this exemption. But under *NRG Power Marketing, LLC v. FERC*, the Commission cannot do so. *NRG* holds that the Commission can only change proposed rates under § 205 when the change is "minor."[196] Eliminating the RPS Exemption is not. PJM's filing is about what to do about "state subsidy programs" with a "material price suppression effect,"[197] and in myriad ways, RPS programs are the most significant such subsidy. They are the most widespread (existing in all PJM states except two),[198] they are the largest in megawatt terms (and perhaps also dollar terms),[199] and

[193] *PJM Interconnection, L.L.C.*, 126 FERC ¶ 61,275, at P 190 (2009).
[194] *See* proposed PJM Tariff, Attachment DD § 5.14(h)(10)(b)(ii) (Option B)
[195] *Id.*
[196] 862 F.3d at 116 (quotation marks omitted).
[197] PJM Filing at 35.
[198] National Conference of State Legislatures, State Renewable Portfolio Standards and Goals, http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx (last visited May 7, 2018).
[199] Giacomoni Aff. ¶ 29.

they are the most popular. In no sense is a tariff that mitigates RPS programs only a "minor" modification to a proposal that exempts these programs.[200]

PJM suggests that even if eliminating the RPS Exemption is not a minor change, the Commission can do so because PJM has provided "affirmative notice" that it would accept this change.[201] But that is not what *NRG* held. The question *NRG* asked was "whether Section 205 allows FERC to suggest modifications that are more than 'minor.'"[202] The answer, *NRG* said, is no.[203] And *NRG* did not stop there: It underscored that a "utility's consent is relevant when FERC proposes 'minor' modifications"—and otherwise, not.[204] While *NRG* also invoked notice concerns as one reason supporting its holding,[205] it nowhere suggested that an RTO can expand the Commission's power to propose non-minor changes by providing "notice" that it will accept them.

Indeed, reading *NRG* to permit PJM's stratagem would badly undermine the stakeholder process. As *NRG* explains, for ISOs and RTOs like PJM, the stakeholder process is crucial for negotiating and vetting contentious proposals.[206] But now PJM, while purporting to propose the MOPR-Ex approach that appeared on the stakeholder ballot, effectively disavows a central plank of that approach. Never did stakeholders have the chance to vote on the Option-B-minus-RPS-Exemption approach that PJM now invites the Commission to adopt. If they had, Exelon suspects that proposal would have failed overwhelmingly—but because PJM bypassed the stakeholder process, the Commission will never know.

[200] *NRG*, 862 F.3d at 116 (quotation marks omitted).
[201] PJM Filing at 114.
[202] *NRG*, 862 F.3d at 110.
[203] *Id.* at 115.
[204] *Id.* at 116.
[205] *Id.* at 116-17.
[206] *Id.*

4. MOPR-Ex's Myriad Other Exceptions Are Unduly Discriminatory And Not Just And Reasonable.

Like Capacity Repricing, MOPR-Ex exempts a variety of state subsidies aimed at promoting "general industrial development" or "siting" in a particular location, and federal production tax credits and tax incentives like the PTC for wind and the Investment Tax Credit for solar.[207] MOPR-Ex also exempts vertically integrated utilities via the "Self-Supply Exemption."[208] These exemptions are arbitrary for the same reasons explained above: These subsidies affect wholesale prices in amounts that would exceed any "materiality"[209] threshold the Commission could apply.[210] Moreover, these subsidies lack the efficiency justification of environmental programs, and they are certainly less economically efficient than the ZEC Program that MOPR-Ex targets.[211] Likewise, PJM's attempt to defend these arbitrary exemptions fails for the same reasons already explained. PJM stresses that these exemptions track exemptions under PJM's existing MOPR.[212] But the justification for the existing MOPR is narrowly focused on combatting buyer-side market power. If that is the MOPR's purpose, then these exemptions might make sense. But MOPR-Ex is an expansion of the MOPR that applies the MOPR more broadly to address any "material price suppression effect,"[213] without regard to whether buyer-side market power is being exercised. These exemptions are incompatible with that broader purpose.

[207] PJM Filing at 100-01 (noting that Capacity Repricing and MOPR-Ex use the same definition of "Capacity Resource with Actionable Subsidy").
[208] *Id.* at 105-06.
[209] PJM Filing at 34.
[210] *Supra* at 26-32.
[211] Willig Decl. ¶¶ 80, 88, 90.
[212] PJM Filing at 100-01, 105-06.
[213] *Id.* at 35.

5. MOPR-Ex's "Public Entity Exemption" Is An Invitation To Buyer-Side Market Power.

PJM's Option B creates a new "Public Entity Exemption" for vertically integrated utilities that are publicly owned. The Self-Supply Exemption would normally govern these entities' ability to obtain an exemption, except that the MOPR-Ex proposal creates an exemption specific to public power. This exemption has all the discriminatory problems of the Self-Supply Exemption, plus another glaring flaw: It invites exercises of buyer-side market power.[214]

The Commission has linked approval of the self-supply exemption to strict net-short and net-long thresholds. In 2011, the Commission rejected an "across-the-board exemption from MOPR for new resources designated as self-supply" that lacked such thresholds, finding it "allow[ed] for an unacceptable opportunity to exercise buyer market power."[215] And when the Commission approved the exemption in 2013, it stressed that its approval "depend[ed] critically on" these thresholds.[216] Only these thresholds, the Commission found, adequately "limit[ed] the incentive of self-supply entities to influence market-clearing capacity prices."[217]

Under this precedent, the Public Entity Exemption is indefensible. It disposes with a quantitative net short threshold altogether, and allows an entity that serves only a few hundred MWs of load to go approximately 600 MWs long. Public power entities with the incentive to exercise buyer-side market power gain the ability to exercise it, subject to practically no mitigation whatsoever. Indeed, the Public Entity Exemption resembles nothing so much as the across-the-broad exemption that the Commission rejected in 2011. There is no legal or economic rationale

[214] *Consol. Edison Co. of N.Y., Inc.*, 150 FERC ¶ 61,139, at P 2 (2013) ("The original purpose of buyer-side mitigation rules—and minimum offer price rules (MOPR) generally—was to address buyer-side market power, i.e., the market power exhibited by entities seeking to lower capacity market prices for the capacity they buy."); Brief of Respondent FERC at 11, *NRG Power Marketing, LLC v. FERC*, 862 F.3d 108 (D.C. Cir. 2017) (No. 15-1452), 2016 WL 5405117 ("The Minimum Offer Price Rule was designed to prevent the exercise of monopsony power ….").
[215] *PJM Interconnection, L.L.C.*, 137 FERC ¶ 61,145, at P 5 (2011).
[216] *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 110 (2013).
[217] *Id.*

for this exemption. It is merely a politically motivated concession to one group of stakeholders to garner support for an attack on disfavored resources. PJM defends its free pass to 600 MW of net long capacity on the theory that the existing Self-Supply Exemption sets a net long threshold of 15% of an entity's capacity obligation for entities with obligations between 500 MW and 5,000 MW—and 600 MW "is equal to 15% of 4,000."[218] But this is arbitrary: Many public entities serve far less than 5,000 MW, and 600 MW is far more than 15% of their capacity obligations:[219]

Table 3: Public Entities Serving Small Amounts Of Load

Muni/Coop	Peak Load (MW; approx.)
Central Virginia Electric Coop.	222
Allegheny Electric Coop.	735
Southern Maryland Electric Coop.	844
Northern Virginia Electric Coop.	1,028
Old Dominion Electric Coop.	2,750
East Kentucky Power Coop.	2,890

Source: U.S. Energy Information Administration, 2016 Form EIA-861 data.

On the short side, PJM points to the requirement that "over the entity's long-term planning horizon, [it] must plan on having under its control a quantity of capacity resources that is 'planned to be less than or equal to' its retail load capacity obligations."[220] But this vague standard is no substitute for the quantitative threshold on which the Commission's prior approval "depend[ed] critically."[221]

6. MOPR-Ex' Unit-Specific Exception Process Is Unlawful.

Even if the Commission could require generators to exclude from "competitive" bids the revenues they receive from environmental programs, MOPR-Ex's unit-specific exception process violates the FPA. That exception allows a generator subject to the MOPR to request "a unit-specific offer price that is consistent with the competitive, cost-based, fixed, net cost of new entry

[218] PJM Filing at 110.
[219] Willig Decl. ¶ 89.
[220] PJM Filing at 111 (quoting proposed PJM Tariff, Attachment DD § 5.14(h)(9)(a) (Option B)).
[221] *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 110 (2013).

were the resource to rely solely on revenues from PJM-administered markets."[222] But if PJM's Office of Interconnection does not deem the generator's proposed price "acceptable," PJM calculates its own proxy bid.[223] The proposed tariff makes no provision for the generator to object to the proxy bid by seeking a determination from the Commission that its unit-specific offer price was just and reasonable under Section 205. That omission is arbitrary and inconsistent with the rights acknowledged as to similar issues in other sections of PJM's Tariff.[224] Depriving generators of this important right also violates Section 205. Suppliers of capacity in PJM's capacity auction are public utilities entitled to file, under Section 205, the rates they seek to charge for their capacity—manifested, in this context, in auction bids—unless the Commission determines that those rates are not just and reasonable.[225]

V. To The Extent The Commission Accepts Option A, It Should Require Certain Changes.

To the extent the Commission accepts Option A, several adjustments are warranted.

First, Option A unjustifiably exempts from repricing any resource of less than 20 MW—an exemption that, in practice, will mostly eliminate solar and wind resources from coverage. Option A's premise, however, is that RPS-supported renewable resources *in the aggregate* affect capacity prices.[226] It makes no sense to exempt renewables that happen to affect prices in small increments. Indeed, this rule is ripe for manipulation: Solar and wind power rely on small

[222] *See* proposed PJM Tariff, Attachment DD § 5.14(j)(4)(b)(i)(A)-(B) (Option B).
[223] *See* proposed PJM Tariff, Attachment DD § 5.14(j)(4)(b)(i)(C) (Option B).
[224] *See* PJM Tariff, Attachment DD, § 5.5A(A)(i)(B) (determinations concerning status as a Capacity Performance Resource); *id.* § 6.4(c) (seller offer caps); *id.* § 6.5(a)(ii)(A) (offers from Planned Generation Capacity Resources); *id.* § 6.6(e) (determinations concerning EFORd); *id.* § 6.6(g) (removal from Generation Capacity Resource status under must-offer rules).
[225] *Atl. City Elec. Co. v. FERC*, 295 F.3d 1, 9 (D.C. Cir. 2002); *see also Atl. City Elec. Co. v. FERC*, 329 F.3d 856 (D.C. Cir. 2003).
[226] PJM Filing at 27-28.

individual pieces wired together at a single interconnection point and developers can configure these assemblies as desired to trigger or avoid repricing.

Second, in order to minimize the impact of repricing on customers and prevent the unnecessary imposition of costs, the Commission should create a price-based materiality screen. PJM proposes its own quantity-based materiality screen of 5,000 MW, RTO-wide, receiving an Actionable Subsidy, or 3.5% of the reliability requirement for an LDA. But these numbers are plucked from the air, unmoored from any theory of what purposes PJM's capacity auction serves or when action is needed to safeguard those purposes. Indeed, despite PJM's claim that its materiality threshold is a desirable "transition mechanism" that "provide[s] the market time to adjust to the[] new rules," PJM buries in a footnote its admission that the ComEd LDA *already* exceeds PJM's threshold, and thus the market will have *no* time to adjust.

In the stakeholder process, Exelon proposed a better materiality screen—one derived from the core purpose of PJM's capacity markets, and that would provide a genuine chance for these markets to adjust. These markets exist to ensure resource adequacy at reasonable cost.[227] So, under Exelon's proposal, repricing occurs only if there is evidence of a threat to resource adequacy due to insufficient needed new entry.

In particular, the first auction stage would run as in PJM's Option A and identify the resources that would receive capacity obligations based on bids reflecting the receipt of state payments. In the next stage, PJM would run a screening auction. It would reprice resources with "Actionable Subsidies" to the default offer cap, Net CONE * B, for the relevant locational delivery area, and then re-run the auction with those repriced bids. This repriced figure—Net CONE * B—

[227] *Cf.* CASPR Order at P 25 ("In evaluating whether, under CASPR, the FCM will continue to maintain resource adequacy at just and reasonable rates, we must assess, as an initial matter, whether the FCM can continue to attract and maintain resource investment when the system requires it, and to do so at a reasonable cost.").

is what PJM and its IMM have identified as a "competitive" bid. If the Stage 2 auction still clears below Net CONE * B for a locational delivery area, this means that "competitive" (and non-repriced) offers are sufficient to drive the clearing price. Repricing is not needed to ensure "competition" or incentivize new entry. Likewise, given the mechanics of the demand curve, a clearing price below the default offer cap implies that the cleared reserve margin exceeds the target reserve margin—so reliability is not in danger either. In these circumstances, the auction meets the Commission's "workably competitive" standard,[228] and repricing is unnecessary. The clearing price in the initial first-stage auction thus would stand.

If, however, the screening auction cleared at (or above) Net CONE * B, that would indicate that competitive bids are not sufficient to drive clearing prices. Instead, new entry is called for, and repricing would proceed as in the second stage of PJM's proposal to incentivize that new entry.

CONCLUSION

The Commission should reject PJM's filing as not just or reasonable.

[228] *PJM Interconnection, L.L.C.*, 110 FERC ¶ 61,053, at P 53 (2005).

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 7th day of May, 2018.

/s/ *Marianne Alvarez*

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Marianne Alvarez
Exelon Corporation