169 FERC ¶ 61,239
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Richard Glick and Bernard L. McNamee.

Calpine Corporation, Dynegy Inc., Eastern Generation, LLC, Homer City Generation, L.P., NRG Power Marketing LLC, GenOn Energy Management, LLC, Carroll County Energy LLC, C.P. Crane LLC, Essential Power, LLC, Essential Power OPP, LLC, Essential Power Rock Springs, LLC, Lakewood Cogeneration, L.P., GDF SUEZ Energy Marketing NA, Inc., Oregon Clean Energy, LLC and Panda Power Generation Infrastructure Fund, LLC

v.

PJM Interconnection, L.L.C.

PJM Interconnection, L.L.C.

Docket Nos. EL16-49-000
EL18-178-000
(Consolidated)

ORDER ESTABLISHING JUST AND REASONABLE RATE

(Issued December 19, 2019)

1. On June 29, 2018, the Commission issued an order[1] finding that out-of-market payments provided, or required to be provided, by states to support the entry or continued operation of preferred generation resources threaten the competitiveness of the capacity market administered by PJM Interconnection, L.L.C. (PJM).[2] Specifically, the Commission found that PJM's Open Access Transmission Tariff (Tariff) is unjust and unreasonable because the Minimum Offer Price Rule (MOPR) fails to address the price-distorting impact of resources receiving out-of-market support. The Commission also found, however, that it could not make a final determination regarding the just and reasonable replacement rate, based on the record presented, and therefore initiated a paper hearing on its own motion in Docket No. EL18-178-000 pursuant to section 206 of the Federal Power Act (FPA).[3]

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[1] *PJM Interconnection, L.L.C.*, 163 FERC ¶ 61,236 (2018) (June 2018 Order).

[2] The June 2018 Order defines "out-of-market payments" as out-of-market revenue that a state either provides, or requires to be provided, to a supplier that participates in the PJM wholesale capacity market. Out-of-market payments include, for example, zero-emissions credits (ZEC) programs and Renewable Portfolio Standards (RPS) programs. June 2018 Order, 163 FERC ¶ 61,236 at P 1 n.1. This order creates a new term, State Subsidies, defined below.

[3] 16 U.S.C. § 825e (2018).

2. As discussed below, we direct PJM to submit a replacement rate that retains PJM's current review of new natural gas-fired resources under the MOPR and extends the MOPR to include both new and existing resources, internal and external, that receive, or are entitled to receive, certain out-of-market payments, with certain exemptions explained below. Going forward, the default offer price floor for applicable new resources[4] will be the Net Cost of New Entry (Net CONE) for their resource class; the default offer price floor for applicable existing resources[5] will be the Net Avoidable Cost Rate (Net ACR) for their resource class. The replacement rate will include three categorical exemptions to reflect reliance on prior Commission decisions: (1) existing self-supply resources, (2) existing demand response, energy efficiency, and storage resources, and (3) existing renewable resources participating in RPS programs. The replacement rate will also include a fourth exemption, the Competitive Exemption, for new and existing resources that are not subsidized and thus do not generally require review to protect "the integrity and effectiveness of the capacity market."[6] To preserve flexibility, PJM will also permit new and existing suppliers that do not qualify for a categorical exemption to justify a competitive offer below the applicable default offer price floor through a Unit-Specific Exemption.[7] Collectively, these exemptions underscore our general intent that most existing resources that have already cleared a capacity auction, particularly those resources the Commission has affirmatively exempted in prior orders, will continue to be exempt from review. Similarly, new resources that certify to PJM that they will not receive out-of-market payments will generally be exempt from review through the Competitive Exemption, with the exception of new gas-fired resources, which were already subject to review under the current MOPR[8] and will remain so under the replacement rate.[9]

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[4] "New" refers to resources that have not previously cleared a PJM capacity auction.

[5] Except as otherwise specified in this order, "existing" refers to resources that have previously cleared a PJM capacity auction. Repowered resources will be considered new.

[6] June 2018 Order, 163 FERC ¶ 61,236 at PP 1-2.

[7] The current Tariff refers to this as the Unit-Specific Exception.

[8] PJM's current MOPR refers to the MOPR reinstated in 2017 following the remand from the D.C. Circuit in *NRG Power Marketing, LLC v. FERC*. 862 F.3d 108 (D.C. Cir. 201) (*NRG*); *see PJM Interconnection, L.L.C.*, 161 FERC ¶ 61,252 (2017) (2017 MOPR Remand Order).

[9] On December 19, 2019, Commissioner Bernard L. McNamee issued a memorandum to the file documenting his decision not to recuse himself from these

3. In establishing this replacement rate under section 206 of the FPA, we do not order refunds. Section 206 of the FPA confers the Commission with the discretion to order refunds from the date that Calpine Corporation, joined by additional generation entities (collectively, Calpine Complainants), filed the complaint in Docket No. EL16-49-000 (Calpine complaint), and we decline to invoke that discretion here.[10]

4. We direct PJM to submit a compliance filing consistent with our guidance within 90 days of the date of this order. In the compliance filing, PJM should also provide revised dates and timelines for the 2019 Base Residual Auction (BRA) and related incremental auctions, along with revised dates and timelines for the May 2020 BRA and related incremental auctions, as necessary.

5. We affirm our initial finding that "[a]n expanded MOPR with few or no exceptions, should protect PJM's capacity market from the price-suppressive effects of resources receiving out-of-market support by ensuring that such resources are not able to offer below a competitive price."[11] However, based on the reasoning set forth below, we do not at this time require review of all offers below the default offer price floor. Moreover, this replacement rate does not purport to solve every practical or theoretical flaw in the PJM capacity market asserted by parties in these consolidated proceedings, or in related proceedings.[12] There continue to be stark divisions among stakeholders about various issues that we cannot resolve on this record. Instead, we concentrate on the core problem presented in the Calpine complaint and in PJM's April 2018 rate proposal—that is, the manner in which subsidized resources distort prices in a capacity market that relies on competitive auctions to set just and reasonable rates.

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dockets, based on memoranda dated October 11, 2019 and December 13, 2019 (and attachments thereto, including email communications dated June 17 and September 17, 2019) from the Designated Agency Ethics Official and Associate General Counsel for General and Administrative Law in the Office of General Counsel.

[10] 16 U.S.C. § 824e(b); June 2018 Order, 163 FERC ¶ 61,236 at P 174; *see Ameren Servs. Co. v. Midwest Indep. Transmission Sys. Operator, Inc.*, 127 FERC ¶ 61,121, at P 157 (2009) ("In cases involving changes to market design, the Commission generally exercises its discretion and does not order refunds when doing so would require re-running a market.").

[11] June 2018 Order, 163 FERC ¶ 61,236 at P 158.

[12] *See id.* PP 16-19 (discussing the Commission's technical conference in Docket No. AD17-11-000 and the complaint filed in Docket No. EL18-169-000).

6. In general, the replacement rate is derived from PJM's initial MOPR-Ex proposal,[13] with certain modifications. We find this approach is superior to the two potential reform paradigms that PJM submitted in this paper hearing proceeding: (1) the resource-specific Fixed Resource Requirement (FRR) Alternative described in the June 2018 Order,[14] which PJM proposed to implement through its Resource Carve-Out (RCO) option,[15] and (2) the revised version of PJM's initial Capacity Repricing proposal that the Commission rejected in the June 2018 Order,[16] which PJM proposed to implement through its Extended Resource Carve-Out (Extended RCO) proposal.[17] In both cases, the accommodation of state subsidy programs would have unacceptable market distorting impacts that would inhibit incentives for competitive investment in the PJM market over the long term. We also decline to adopt intervenors' alternative proposals.[18]

7. The first significant change we require in the replacement rate is that PJM must extend the MOPR to include review of offers made by non-exempt existing resources in addition to new entrants. This is necessary because the record demonstrates that an immediate threat to the competitiveness of the PJM capacity market is the decision by some states to employ out-of-market subsidies to prevent or delay the retirement of state-

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[13] Of the two mutually-exclusive proposals PJM presented in April 2018, MOPR-Ex received significantly more stakeholder support than the Capacity Repricing alternative that PJM posited as its first choice. *See* PJM Transmittal Letter at 17 n.40; June 2018 Order, 163 FERC ¶ 61,236 at PP 4 n.4, 20.

[14] The Commission described the resource-specific FRR Alternative as an option, similar in concept to the utility-wide FRR construct in the preexisting Tariff, which would allow suppliers to choose to remove individual resources receiving out-of-market support from the PJM capacity market, along with a commensurate amount of load, for some period of time. *See* June 2018 Order, 163 FERC ¶ 61,236 at PP 8, 160.

[15] *See* PJM Initial Testimony at 50-64.

[16] *See* June 2018 Order, 163 FERC ¶ 61,236 at PP 63-72.

[17] *See* PJM Initial Testimony at 64-75.

[18] *See, e.g.*, Exelon Initial Testimony at 7 (proposing a carbon pricing mechanism); Maryland Commission Initial Testimony at 9-10 (proposing a competitive carve-out auction); Vistra Initial Testimony at 3-4 (proposing a two-stage auction, based in part on ISO New England Inc.'s Competitive Auctions with Sponsored Policy Resources); Buckeye Initial Testimony at 4 (proposing that PJM's capacity market operate on a strictly voluntary and residual basis).

preferred resources that are unable to compete with more efficient generation.[19] Moreover, certain states have chosen to enact additional programs even after the June 2018 Order issued.[20] We are aware that the extension of the MOPR may prevent certain existing resources that states have recently chosen to subsidize from clearing PJM's capacity auctions; however, the decision by certain states to support less economic or uneconomic resources in this manner cannot be permitted to prevent the new entry or continued operation of more economic generating capacity in the federally-regulated multi-state wholesale capacity market. New state policies that support the continued operation of existing uneconomic resources in PJM are just as disruptive to competitive wholesale market outcomes as earlier attempts to support preferred new gas-fired resources, which the Commission prevented by eliminating the state mandate exemption for new resources in 2011.[21] As in that earlier proceeding, the replacement rate adopted here does not deprive states in the PJM region of jurisdiction over generation facilities because states may continue to support their preferred resource types in pursuit of state policy goals.[22] Nor does this order prevent states from making decisions about preferred generation resources: resources that states choose to support, and whose offers may fail to clear the capacity market under the revised MOPR directed in this order, will still be permitted to sell energy and ancillary services in the relevant PJM markets. However, the Commission has a statutory obligation, and exclusive jurisdiction, to ensure that wholesale capacity rates in the multi-state regional market are just and reasonable.[23] We

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[19] *See, e.g.*, June 2018 Order, 163 FERC ¶ 61,236 at PP 1-2, 21-22, 96, 102-03, 105-06, 150-56.

[20] *See infra* note 55 (describing new legislation).

[21] *See PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,022 (2011) (2011 MOPR Order), *reh'g denied*, 137 FERC ¶ 61,145 (2011) (2011 MOPR Rehearing Order), *aff'd sub nom. N.J. Bd. of Pub. Utils. v. FERC*, 744 F.3d 74 (3d Cir. 2014) (*NJBPU*).

[22] *See* June 2018 Order, 163 FERC ¶ 61,236 at PP 158-59.

[23] *See* 16 U.S.C. §§ 824, 824d, 824e; 2011 MOPR Order, 135 FERC ¶ 61,022 at P 143 ("While the Commission acknowledges the rights of states to pursue legitimate policy interests, and while, as we have said, any state is free to seek an exemption from the MOPR under section 206, it is our duty under the FPA to ensure just and reasonable rates in wholesale markets. . . . Because below-cost entry suppresses capacity prices, and because the Commission has exclusive jurisdiction over wholesale rates, the deterrence of uneconomic entry falls within the Commission's jurisdiction, and we are statutorily mandated to protect the [capacity market] against the effects of such entry."), *quoted with approval in NJBPU*, 744 F.3d at 100, *cited in Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1296 (2016); 2011 MOPR Rehearing Order, 137 FERC ¶ 61,145 at P 3 ("Our intent is not to pass judgment on state and local policies and objectives with regard to the

find that this replacement rate will ensure resource adequacy at rates that are just and reasonable and not unduly discriminatory or preferential.[24]

8. The second significant change we require in the replacement rate is that PJM must extend the MOPR to apply to all resource types.[25] The June 2018 Order did not find that PJM's ongoing review of new gas-fired resources under the current rule was unjust or unreasonable and nothing submitted in the paper hearing has persuaded us to alter that conclusion. However, the record in this proceeding demonstrates that gas-fired generation facilities "are not the only resources likely or able to suppress capacity prices."[26] The increased level of out-of-market support for certain renewable resources in PJM through RPS programs, in addition to out-of-market support for nuclear- and coal-fired plants through ZEC programs and the Ohio Clean Air program, requires us to revisit the Commission's earlier conclusion that non gas-fired resources do not require mitigation.

9. We therefore find that any resource, new or existing, that receives, or is entitled to receive, a State Subsidy, and does not qualify for one of the exemptions described in the

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development of new capacity resources, or unreasonably interfere with those objectives. We are forced to act, however, when subsidized entry supported by one state's or locality's policies has the effect of disrupting the competitive price signals that PJM's [capacity auction] is designed to produce, and that PJM as a whole, including other states, rely on to attract sufficient capacity."), *quoted with approval in NJBPU*, 744 F.3d at 101, *quoted with approval in Hughes*, 136 S. Ct. at 1296. This determination also comports with precedent in other regional markets. *See, e.g*., *ISO New England Inc.*, 162 FERC ¶ 61,205, at P 21 & n.32 (2018) (CASPR Order); *ISO New England, Inc.*, 135 FERC ¶ 61,029, at P 170 (2011) (2011 ISO-NE MOPR Order), *reh'g denied*, 138 FERC ¶ 61,027 (2012), *aff'd sub nom. New Eng. Power Generators Ass'n v. FERC*, 757 F.3d 283, 293-295 (D.C. Cir. 2014) (*NEPGA*); *Connecticut Dept. of Pub. Util. Control v. FERC*, 569 F.3d 477, 481 (D.C. Cir. 2009) (*Connecticut PUC*), *adopted in NJBPU*, 744 F.3d at 96-97.

[24] June 2018 Order, 163 FERC ¶ 61,236 at P 158; PJM Tariff, Att. DD, § 1 (stating, among other things, that the Reliability Pricing Model (RPM or capacity market) provides for the forward commitment of resources to ensure reliability in future delivery years); *see also* CASPR Order, 162 FERC ¶ 61,205 at P 21 (a capacity market should "produce a level of investor confidence that is sufficient to ensure resource adequacy at just and reasonable rates").

[25] *See* June 2018 Order, 163 FERC ¶ 61,236 at P 155.

[26] *Id*.

body of this order, should be subject to the MOPR.[27] Borrowing from the first two prongs of PJM's proposed definition of Material Subsidy, we consider a State Subsidy to be: a direct or indirect payment, concession, rebate, subsidy, non-bypassable consumer charge, or other financial benefit that is (1) a result of any action, mandated process, or sponsored process of a state government, a political subdivision or agency of a state, or an electric cooperative formed pursuant to state law, and that (2) is derived from or connected to the procurement of (a) electricity or electric generation capacity sold at wholesale in interstate commerce, or (b) an attribute of the generation process for electricity or electric generation capacity sold at wholesale in interstate commerce, or (3) will support the construction, development, or operation of a new or existing capacity resource, or (4) could have the effect of allowing a resource to clear in any PJM capacity auction. Demand response, energy efficiency, and capacity storage resources that participate in the PJM capacity market are considered to be capacity resources for purposes of this definition. Resources that receive, or are entitled to receive, State Subsidies (hereinafter referred to as State-Subsidized Resources) that intend to offer below the default offer price floor for a given resource type, and do not qualify for a categorical exemption, must support their offers through a Unit-Specific Exemption. We decline to adopt a materiality threshold for the level of State Subsidies or the size of State-Subsidized Resources. A threshold based on resource size will not prevent a collection of smaller resources from having a significant cumulative impact on competitive outcomes. In addition, if a State Subsidy is small enough for a capacity resource to perform economically without it, then the State-Subsidized Resource should be able to secure a Unit-Specific Exemption.

10. We find that we cannot, however, apply this approach to resources that receive out-of-market support through subsidies created by federal statute. That is not because we think that federal subsidies do not distort competitive market outcomes. On the contrary, federal subsidies distort competitive markets in the same manner that State Subsidies do. Nevertheless, the Commission's authority to set just and reasonable rates under the FPA comes from Congress and subsidies that are directed by Congress through federal legislation have the same legal force as the FPA. This Commission may not disregard or nullify the effects of federal legislation.[28]

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[27] New and existing resources that certify to PJM that they will forego any State Subsidies to which they are entitled qualify for the Competitive Exemption.

[28] *See, e.g.*, *Morton v. Mancari*, 417 U.S. 535, 550-51 (1974) ("Where there is no clear intention otherwise, a specific statute will not be controlled or nullified by a general one, regardless of priority enactment."); *Silver v. N.Y. Stock Exchange*, 373 U.S. 341, 357 (1963) (an appropriate analysis is one that "reconciles the operation of both statutory schemes with one another rather than holding one completely ousted"); *Tug Allie-B. v. United States*, 273 F.3d 936, 941 (11th Cir. 2001) (reiterating general statutory

11. We also find that the just and reasonable replacement rate should provide five exemptions from application of the default offer price floor.

12. First, we direct PJM to include a Self-Supply Exemption for self-supply resources that fulfill at least one of these criteria: (1) have successfully cleared an annual or incremental capacity auction prior to this order; (2) have an executed interconnection construction service agreement on or before the date of this order; or (3) have an unexecuted interconnection construction service agreement filed by PJM for the resource with the Commission on or before the date of this order.[29] This exemption recognizes that many self-supply entities made resource decisions based on Commission orders indicating that those decisions would not be disruptive to competitive markets, including the Commission's acceptance in 2013 of the affirmative exemption for new self-supply resources prior to our order on remand from *NRG*.[30] However, as further discussed below, we can no longer assume that there is any substantive difference among the types of resources participating in PJM's capacity market with the benefit of State Subsidies. Going forward, new non-exempt resources owned by self-supply entities will be subject to review for offers below the default offer price floor on the same basis as other resources of the same type. Public power and vertically integrated utilities that prefer to craft their own resource adequacy plans remain free to do so through the FRR Alternative option already present in the existing PJM Tariff.

13. Second, we direct PJM to include a Demand Response, Energy Efficiency, and Capacity Storage Resources Exemption.[31] Demand response and energy efficiency resources that fulfill at least one of these criteria will be eligible: (1) have successfully cleared an annual or incremental capacity auction prior to this order; (2) have completed registration on or before the date of this order; or (3) have a measurement and verification plan approved by PJM for the resource on or before the date of this order. Similarly, capacity storage resources that fulfill at least one of these criteria will be eligible:

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construction canons that statutes relating to the same subject matter should be construed harmoniously and, if not, the more recent or specific statute should prevail over the older and more general law).

[29] *See infra* IV.D.3.

[30] *See PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 107-15 (2013) (2013 MOPR Order), *order on reh'g & compliance*, 153 FERC ¶ 61,066, at P 52-61 (2015) (2015 MOPR Order), *vacated & remanded sub nom. NRG Power Mktg., LLC v. FERC*, 862 F.3d 108 (D.C. Cir. 2017) (*NRG*). *But see* 2017 MOPR Remand Order 161 FERC ¶ 61,252, at P 41 (removing the self-supply exemption on remand from *NRG*), *reh'g pending*.

[31] *See infra* IV.D.4.

(1) have successfully cleared an annual or incremental capacity auction prior to this order; (2) have an executed interconnection construction service agreement on or before the date of this order; or (3) have an unexecuted interconnection construction service agreement filed by PJM for the resource with the Commission on or before the date of this order. This exemption is justified because these resources traditionally have been exempt from review. However, PJM must develop appropriate Net CONE values by resource class for these three categories of new resources to implement in the next annual auction, as well as appropriate Net ACR values for these three categories of resources that become existing resources in subsequent auctions. Contrary to PJM's position, we think it is feasible for PJM to determine those values for demand resources that rely on various types of behind-the-meter generation as a substitute for purchasing wholesale power. The scale may be different for behind-the-meter generation, but the fundamental elements of the analysis are the same. We realize that setting default offer price floor values may be more difficult for demand resources that commit to cease using wholesale power, rather than shift to behind-the-meter generation as an alternative to consuming wholesale power, and energy efficiency resources. For non-generating demand-side resources, PJM may rely on a historical averaging approach similar to the one it has already proposed for planned demand response resources to create a proxy default offer price floor,[32] recognizing that PJM may need to evaluate idiosyncratic costs for things such as lost manufacturing value when considering requests for a Unit-Specific Exemption.

14. Third, we direct PJM to include an RPS Exemption for renewable resources receiving support from state-mandated or state-sponsored RPS programs that fulfill at least one of these criteria: (1) have successfully cleared an annual or incremental capacity auction prior to this order; (2) have an executed interconnection construction service agreement on or before the date of this order; or (3) have an unexecuted interconnection construction service agreement filed by PJM for the resource with the Commission on or before the date of this order.[33] We find this exemption just and reasonable because the Commission has expressly exempted those resources in the past based on the assessment that such resources had little impact on clearing prices, and the initial investments in those resources—unlike certain existing resources that new State Subsidies are designed to retain—were made in reliance on earlier Commission determinations that the limited quantity of RPS resources would not undermine the market. Going forward, however, new non-exempt renewable resources will be subject to the Net CONE default offer price floor for their specific resource type. RPS resources that become existing resources after the next annual auction, and that do not qualify under one the exemptions we have directed, will be subject to the Net ACR default offer

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[32] *See* PJM Initial Testimony at 42-43 & tbl. 2.

[33] *See infra* IV.D.1.

price floor for their specific resource type. We are aware that, as a practical matter, the Net ACR default offer price floor for existing renewable resources poses no real obstacle because PJM proposed to set that value at zero.[34] On compliance, we direct PJM to provide additional justification for that determination.

15. Fourth, we direct PJM to include a Competitive Exemption for both new and existing resources , including demand-side resources, that certify they will forego any State Subsidies. This exemption is based on the competitive entry exemption the Commission accepted in 2013, prior to the orders on remand from *NRG*.[35] We think it is sufficient, at this point, to allow a new or existing resource (other than a new gas-fired resource) to avoid review of a capacity offer below the applicable default price floor if the resource certifies to PJM that it will forego any State Subsidy.

16. Fifth, we direct PJM to maintain the Unit-Specific Exemption, expanded to cover existing and new State-Subsidized Resources of all resource types, to permit any resource that can justify an offer lower than the default offer floor to submit such bids to the Market Monitor for review. We find that PJM's Unit-Specific Exemption, with the modifications described below, is an important tool for establishing just and reasonable rates. This exemption is largely based on the exemption the Commission accepted in 2011 and reaffirmed in 2013. The replacement rate adopted here is intended to promote the market's selection of the most economic resources available to serve load reliably, not to reject resources simply because they are subsidized to some degree. The review process operates as a safety valve that helps to avoid over-mitigation of resources that demonstrate their offers are economic based on a rational estimate of their expected costs and revenues without reliance on out-of-market financial support through State Subsidies.[36] The review process may also help to mitigate offers by potential new

[34] *See* PJM Initial Testimony at 46 & tbl. 3.

[35] *See* 2013 MOPR Order, 143 FERC ¶ 61,090 at PP 53-62; 2015 MOPR Order, 153 FERC ¶ 61,066 at PP 32-41. *But see* 2017 MOPR Remand Order, 161 FERC ¶ 61,252 at P 41 (removing the competitive entry exemption on remand from *NRG*).

[36] This assessment can be complex and must yield to some level of subjective judgment, but the financial modeling assumptions PJM proposed for calculating the Net CONE in proposed Tariff section 5.14(h)(iv)(B)(2) of its initial filing in the paper hearing appear to present a reasonable objective basis for the analysis of new entrants. These factors are: (i) nominal levelization of gross costs, (ii) asset life of 20 years, (iii) no residual value, (iv) all project costs included with no sunk costs excluded, (v) use first year revenues, and (vi) weighted average cost of capital based on the actual cost of capital for the entity proposing to build the capacity resource. PJM Initial Testimony at 42.

entrants who are less interested in following through on actual performance than reselling capacity obligations to other resources that fail to clear an auction.[37]

17. Exemptions, by definition, mean different treatment. Our decision that PJM should exempt certain existing resources by essentially grandfathering them from review is not, however, unduly discriminatory. The exemptions that we direct here are an extension or re-adoption of the *status quo ante* for many types of resources that accept the premise of a competitive capacity market,[38] have operated within the market rules as those rules have evolved over time, and made decisions based on affirmative guidance from the Commission indicating that those decisions would not be disruptive to competitive markets. This order addresses the growing impact of State-Subsidized Resources because those subsidies reject the premise of the capacity market and circumvent competitive outcomes.

I. <u>Background</u>

18. PJM operates the largest wholesale competitive electricity market in the country, covering 13 states and the District of Columbia. To protect customers against the possibility of losing service, PJM is responsible for ensuring that its system has sufficient generating capacity to meet its resource adequacy obligations, which it does through a capacity market. PJM's capacity construct has evolved over time. The current market design, the RPM, was first approved by the Commission in 2006.[39] Under the RPM, the procurement and pricing of unmet capacity obligations is done on a multi-year forward basis through an auction mechanism.[40] Since the prices for capacity are determined in these forward auctions, the RPM construct introduced a MOPR for new resources, subject to certain conditions, to ensure these resources did not depress capacity market prices below a competitive level.[41] This MOPR did not apply to baseload resources that required more than three years to develop (nuclear, coal, integrated gasification combined cycle facilities), hydroelectric facilities, or any upgrade or addition to an existing

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[37] *See* generally Monitoring Analytics, Analysis of Replacement Capacity for RPM Commitments: June 1, 2007 to June 1, 2017 (PJM IMM Dec. 14, 2017).

[38] This Commission determined many years ago that the best way to ensure the most cost-effective mix of resources is selected to serve the system's capacity needs was to rely on competition. That model cannot work if we allow State Subsidies to distort the economic selection of adequate power supplies for the multi-state PJM region.

[39] *PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,079, at P 9 (2006).

[40] *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331, at P 6 (2006).

[41] *Id*. P 103.

generation capacity resource. Additionally, the initial MOPR included the state mandate exemption, which exempted any new entry being developed in response to a state regulatory or legislative mandate to resolve a projected capacity shortfall affecting that state in the delivery year.[42]

19. PJM's MOPR was revisited in 2008 and 2009,[43] and again in 2011, when the Commission responded to a complaint by the PJM Power Providers Group (P3) and Tariff revisions proposed by PJM to address certain procurement initiatives in New Jersey and Maryland that sought to support entry of new generation through out-of-market payments. In particular, PJM proposed to replace the state mandate exemption with a new requirement that a request for a MOPR exemption, based on state policy grounds, must be approved by the Commission pursuant to a section 206 authorization, subject to a showing that the relevant sell offer was based on new entry that is pursuant to a "state-mandated requirement that furthers a specific legitimate state objective" and that the sell offer would not "lead to artificially depressed capacity prices" or "directly or adversely impact [the Commission's] ability to set just and reasonable rates for capacity sales."[44] In the 2011 MOPR proceeding, PJM's MOPR was revised to eliminate the state mandate exemption, but the Commission rejected PJM's proposed section 206 replacement mechanism as duplicative of an aggrieved party's right to seek section 206 relief.[45] The 2011 MOPR proceeding also, among other things, accepted a unit-specific review process authorizing PJM and the IMM to review cost justifications submitted by resources whose sell offers fell below the established floor.[46] Wind and solar facilities were also added to the list of resources permitted to make zero-priced offers and upgrades and additions to existing capacity resources were no longer exempted.[47]

20. Further changes to the MOPR were made in 2013 in response to PJM's proposed Tariff revisions to address the effects of new, state-supported natural gas-fired entrants. In the 2013 MOPR proceeding, the Commission conditionally accepted PJM's proposal

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[42] *Id*. P 103 n.75.

[43] *See PJM Interconnection, L.L.C.*, 123 FERC ¶ 61,037 (2008); PJM Interconnection, L.L.C., 124 FERC ¶ 61,272 (2008); *PJM Interconnection, L.L.C.*, 126 FERC ¶ 61,275 (2009), *order on reh'g and compliance, PJM Interconnection*, L.L.C., 128 FERC ¶ 61,157 (2009).

[44] 2011 MOPR Order, 135 FERC ¶ 61,022 at P 125 (internal quotations omitted).

[45] 2011 MOPR Rehearing Order, 137 FERC ¶ 61,145 at P 139.

[46] *Id*. P 242.

[47] *Id*. P 152.

to categorically exempt competitive entry and self-supply, subject to PJM's retaining the unit-specific review process, which PJM had proposed to eliminate. Under the competitive entry exemption, a market seller could qualify for exemption if it received no out-of-market funding, or if the resource received outside funding, such funds were a product of participating in a competitive auction open to all available resources.[48] The self-supply exemption exempted public power, single customer entities, and vertically integrated utilities from the MOPR, subject to certain net-short or net-long thresholds.[49] The 2013 MOPR proceeding revised the MOPR to expressly state the MOPR applied only to gas-fired resources, namely combustion turbine, combined cycle, and integrated gasification combined cycle resources.[50]

21. While these changes were initially accepted by the Commission, the United States Court of Appeals for the District of Columbia found, in July 2017, that the Commission exceeded its FPA section 205 authority in modifying PJM's proposal.[51] Accordingly, the court vacated and remanded the relevant Commission orders. On remand, the Commission rejected PJM's competitive entry and self-supply exemptions because, without the addition of the unit-specific review process, there was no means for non-exempted resources with costs lower than the default offer price floor to be considered competitive in the auction.[52] Consequently, PJM's previously approved market design, i.e., the market design in effect prior to the 2013 MOPR proceeding, was reinstated in 2017. At present, PJM's current MOPR requires that all new, non-exempted natural gas-fired resources offer at or above the default offer price floor, equal to the Net CONE for the resource type, or choose the unit-specific review process. Because only new, non-exempted natural gas-fired resources are subject to review under PJM's current MOPR, it permits zero-priced offers by nuclear, coal, integrated gasification combined cycle, wind, solar, and hydroelectric resources.[53]

22. The June 2018 Order was the next substantive order addressing PJM's MOPR. As noted in the June 2018 Order, over the last few years the PJM region has experienced a significant increase in out-of-market payments provided by states for the purpose of supporting the entry or continued operation of preferred resources that may not otherwise

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[48] 2013 MOPR Order, 143 FERC ¶ 61,090 at PP 24, 53.

[49] *Id*. PP 25, 107.

[50] *Id*. PP 145, 166.

[51] *NRG*, 862 F.3d at 117.

[52] 2017 MOPR Remand Order, 161 FERC ¶ 61,252 at P 41.

[53] *Id*. PP 41-42.

be able to clear in the competitive wholesale capacity market. Such uneconomic entry and retention allows for the distortion of capacity market prices and compromises the ability of those prices to serve as signals for the efficient entry and exit of resources. The June 2018 Order noted that what started as limited state support for renewable resources has grown to include support for thousands of megawatts (MW) of resources ranging from small solar and wind farms to large nuclear plants. In addition, renewable generation targets for state RPS programs continue to increase.[54] Further, State Subsidies for capacity resources continue to expand to cover additional resource types based on an ever-widening scope of justifications.[55]

23. As this trend developed, the Calpine Complainants, filed a complaint in Docket No. EL16-49-000 on March 21, 2016, asserting that PJM's Tariff, specifically the MOPR, is unjust and unreasonable because it does not address the effect of subsidized resources on the capacity market. The Calpine Complainants argued that subsidized resources submit bids lower than their true costs to make sure they clear the market, thereby suppressing capacity market prices. In May 2017, during a period in which the Commission had no quorum, Commission staff conducted a technical conference to explore the impact of state subsidies on regional capacity markets. Subsequently, on April 9, 2018, PJM proposed revisions to the MOPR in Docket No. ER18-1314-000 (PJM 2018 April Filing), aimed at addressing the price impacts of state out-of-market support for capacity resources. PJM proposed two mutually exclusive alternatives: Capacity Repricing, a two-stage annual auction, with capacity commitments first determined in stage one of the auction and the clearing price set separately in stage two,

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[54] *See infra* P 175.

[55] Since the June 2018 Order, some states have also enacted new legislation to subsidize new or existing resources. *See* Ohio Clean Air Program, House Bill No. 6, 133rd Gen. Assemb., Reg. Sess. (July 23, 2019) (making numerous modifications to the Ohio Revised Code to provide subsidies for certain nuclear and coal-fired resources, effective Oct. 22, 2019); Maryland Clean Energy Jobs Act, Senate Bill No. 516, 2019 Reg. Sess. (cross-filed as H.B. 1158) (May 25, 2019) (requiring, among other things, an increase in the state's RPS target to 50% by 2030). In addition, Pennsylvania is currently considering several bills to support nuclear and renewable resources. For example, House Bill 1195 and Senate Bill 600 would increase the usage requirement of Tier 1 renewable resources in the Alternative Energy Portfolio Standards (AEPS) from 8% to 30% by 2030 and dedicate 7.5% of that target to in-state grid-scale solar and 2.5% to distributed solar generation. House Bill 11, would create a third tier for nuclear power in the state's AEPS program, from which suppliers must buy an additional 50% of their power by 2021.

and MOPR-Ex, an extension of PJM's existing MOPR to include both new and existing resources, subject to certain exemptions, including a unit-specific review process.

24. In the June 2018 Order, the Commission addressed the Calpine complaint and PJM's April 2018 filing. First, the Commission rejected PJM's Capacity Repricing proposal, finding that "it is unjust and unreasonable to separate the determination of price and quantity for the sole purpose of facilitating the market participation of resources that receive out-of-market support."[56] Second, the June 2018 Order also rejected PJM's MOPR-Ex proposal as unjust and unreasonable and unduly discriminatory. The Commission found that, while PJM's MOPR-Ex proposal would have prevented some resources, but not others, that receive certain out-of-market support from displacing competitive resources and suppressing prices, PJM failed to "provide 'a valid reason for the disparity' among resources that receive out of market support through [RPS] programs, which [we]re exempt from the MOPR-Ex proposal, and other state-sponsored resources, which [we]re not."[57]

25. Next, acting on the records of the Calpine complaint proceeding and PJM's April 2018 filing, the June 2018 Order found that PJM's existing Tariff is unjust and unreasonable because PJM's existing MOPR fails to protect the wholesale capacity market against price distortions from out-of-market support for uneconomic resources. The Commission stated that the PJM Tariff "allows resources receiving out-of-market support to significantly affect capacity prices in a manner that will cause unjust and unreasonable and unduly discriminatory rates in PJM regardless of the intent motivating the support."[58] The Commission further stated that out-of-market support by states has reached a "level sufficient to significantly impact capacity market clearing prices and the integrity of the resulting price signals on which investors and consumers rely to guide the orderly entry and exit of capacity resources."[59] The Commission explained that out-of-market support permits new and existing resources to submit low or zero priced offers into the capacity market, resulting in price distortions and cost shifts while retaining uneconomic resources.[60]

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[56] June 2018 Order, 163 FERC ¶ 61,236 at P 64.

[57] *Id*. P 100 (quoting *Black Oak Energy, LLC v. FERC*, 725 F.3d 230, 239 (D.C. Cir. 2013)).

[58] *Id*. P 156.

[59] *Id*.

[60] *Id*. PP 150, 153-55.

26. While the Commission found that PJM's Tariff was unjust and unreasonable, the Commission stated that it could not make a final determination regarding a just and reasonable replacement rate based on the record presented. The June 2018 Order preliminarily found that a replacement rate should expand the MOPR to cover out-of-market support for all new and existing resources, regardless of resource type, with few to no exemptions.[61] The June 2018 Order also proposed and sought comment on the potential use of a resource-specific FRR Alternative option as a method of accommodating resources that receive out–of–market support while protecting the integrity of the PJM capacity market for competitive resources and load.[62] The Commission initiated a paper hearing to allow the parties to submit additional arguments and evidence regarding the replacement rate.[63]

II. Notice of Paper Hearing and Responsive Pleadings

27. Notice of the paper hearing was published in the *Federal Register*, 83 Fed. Reg. 32,113 (2018), with interventions due on or before July 20, 2018. Timely-filed motions to intervene and motions to intervene out-of-time were submitted by the entities listed in Appendix 1 to this order.[64]

28. The June 2018 Order established a paper hearing schedule with an initial round of testimony, evidence, and/or argument due within 60 days of June 2018 Order, with reply testimony due 30 days thereafter. Following a motion from the Organization of PJM States, Inc. (OPSI) to extend the testimony deadline, the Commission extended the deadline for filing initial testimony, evidence, and/or argument to October 2, 2018, with reply testimony filed November 6, 2018. Such testimony was submitted by the entities listed in Appendix 2 to this order.

29. In addition, answers were submitted by Exelon, on November 21, 2018; FirstEnergy Utilities, on November 26, 2018; Direct Energy Business Marketing, et al. and NextEra Energy Resources, LLC, and PJM, on December 6, 2018; Clean Energy Industries, on

[61] *Id*. P 158.

[62] *Id*. PP 160-61.

[63] *Id.* PP 8, 149, 157, 164-72.

[64] For a listing of previously granted interventions in this proceeding, *see* June 2018 Order, 163 FERC ¶ 61,236 at App. 1 & App. 2.

December 20, 2018;[65] Union of Concerned Scientists, on December 26, 2018; PSEG Companies, on December 28, 2018 and August 20, 2019; PJM Industrial Customer Coalition, on January 15, 2019; Joint Consumer Advocates, on April 2, 2019;[66] and LS Power Associates, L.P., in the form of Motions to Lodge, on April 5, 2019 and August 16, 2019. Joint Stakeholders filed reply comments to PSEG's August 20, 2019 comments on August 23, 2019. AEP and Duke filed reply comments to LS Power's August 16, 2019 motion to lodge on August 29, 2019.

III. Procedural Matters

30. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2019), timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. In addition, pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2019), the Commission will grant the unopposed late-filed motions to intervene, given the parties' interest in this proceeding, the early stage of the proceeding, and the absence of any undue prejudice or delay.

31. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2019), prohibits an answer unless otherwise ordered by the decisional authority. We accept the answers filed by Exelon, FEU, Joint Parties, PJM, Clean Energy Industries, UCS, PSEG, PJM-ICC, Joint Stakeholders, AEP/Duke, Joint Consumer Advocates, and LS Power, because they have assisted us in our decision-making process.

[65] Clean Energy Industries is comprised of the following entities: the American Wind Energy Association; the Solar RTO Coalition; and the Solar Energy Industries Association.

[66] Joint Consumer Advocates is comprised of the following entities: Illinois Citizens Utility Board; West Virginia Consumer Advocate Division; Delaware Division of the Public Advocate; Maryland Office of People's Counsel; and the Office of the People's Counsel for the District of Columbia.

IV. Discussion

A. Expanded MOPR

1. Replacement Rate Expanded MOPR

32. In the June 2018 Order, the Commission preliminarily found that PJM should expand the MOPR to cover out-of-market support to all new and existing resources, regardless of the resource type, with few or no exceptions.[67] We reaffirm that finding.

a. Intervenor Positions

33. Multiple intervenors support an expanded MOPR with few or no exemptions.[68] Some argue that, because all resources receiving out-of-market support at least in theory have the ability to submit low offer prices in the capacity market, regardless of the nature or purpose of the out-of-market support they receive, an expanded MOPR should extend to any and all capacity resources that receive out-of-market support, without exception.[69] Several intervenors contend that exemptions to the MOPR would be contrary to the goals and policy described in the June 2018 Order, including that states must bear the cost of their own actions.[70]

34. Conversely, other intervenors oppose an expanded MOPR.[71] The Illinois Attorney General argues that PJM's existing MOPR rules and definitions, which it contends were

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[67] June 2018 Order, 163 FERC ¶ 61,236 at P 158.

[68] *See, e.g.*, ACCCE/NMA Initial Testimony at 3-4; API Initial Testimony at 21-22; Brookfield Initial Testimony at 2, 6; LS Power Initial Testimony at 7-8; NEI Initial Testimony at 5; NRG Initial Testimony at 8; Ohio Commission Initial Testimony at 2; P3 Initial Testimony at 9-11; Starwood Initial Testimony at 2-3; Vistra Reply Testimony at 7-8, Russo Reply Aff. at 29.

[69] *See, e.g.*, NEI Initial Testimony at 5; API Initial Testimony at 20; Exelon Initial Testimony at 17; LS Power Initial Testimony at 9.

[70] API Initial Testimony at 21-22; Exelon Initial Testimony at 6 (citing June 2018 Order, 163 FERC ¶ 61,236 at P 162); Exelon Reply Testimony at 56; LS Power Initial Testimony at 9-10.

[71] *See, e.g.*, ELCON Initial Testimony at 2-4, 7; IMEA Reply Testimony at 4; Policy Integrity Initial Testimony at 6-16 (arguing an expanded MOPR without an accommodation mechanism is not just and reasonable); Joint Consumer Advocates Initial

designed to address monopsony power, are not the best model to achieve the Commission's goal in this proceeding.[72] Some intervenors also argue that expanding the MOPR will increase costs to load by elevating offers above competitive levels,[73] especially in zones where one generator has substantial market power,[74] or by causing PJM to over-procure capacity.[75] Policy Integrity argues that excess capacity is undesirable and may lead to consumers paying twice for available capacity, while lowering energy market prices.[76] Policy Integrity contends that lower energy prices could lead to inflated capacity market prices, if resources were required to bid higher to recover their costs.[77]

35. Some intervenors argue that an expanded MOPR could increase the risk of market participants exercising supplier-side market power, because it would reduce the number of bidders in price ranges below the default offer price floors, as well as the opportunity cost of withholding capacity.[78] The Illinois Attorney General submits that a supplier with market power could be incentivized to bid a subsidized resource high to increase the clearing price for its other, non-subsidized units, but the MOPR only addresses incentives to bid a resource below cost.[79] As such, the Illinois Attorney General urges the Commission to adopt rules that consider whether a subsidized resource is "part of an

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Testimony at 2; New Jersey Board Reply Testimony at 4; Illinois Commission Initial Testimony at 3.

[72] Illinois Attorney General Initial Testimony at 10.

[73] ELCON Initial Testimony at 4.

[74] Illinois Attorney General Initial Testimony at 13. The Illinois Attorney General argues that there are not enough resources in ComEd for the zone to clear without some of Exelon's nuclear units clearing, and accuses Exelon of withholding capacity to raise the zonal clearing price. Illinois Attorney General Initial Testimony at 8; *see also* PJM Consumer Representatives Reply Testimony at 17 (agreeing with the Illinois Attorney General that the capacity market is subject to excessive market power and urging the Commission to consider this in its determination).

[75] Policy Integrity Initial Testimony at 7, 12.

[76] *Id.* at 13.

[77] *Id*.

[78] *Id*. at 7, 15-16; Clean Energy Advocates Reply Testimony at 4.

[79] Illinois Attorney General Initial Testimony at 13.

organization (1) that does not have any interest in reducing capacity prices due to its ownership of other resources that receive capacity revenues, and (2) that can exercise market power in the capacity market."[80] Finally, the Illinois Attorney General asserts that the Commission should require release of bidding data for any auction in which resources subject to the new MOPR participate to the Market Monitor, as well as requesting state commissions, state attorneys general, and state utility consumer representatives, to provide transparency and ensure that the exercise of market power and unjust and unreasonably high prices are not an unintended consequence of the MOPR.[81]

36. Joint Consumer Advocates state that the application of an expanded MOPR could substantially impact the ability of vertically integrated states to continue to participate in PJM's capacity market.[82] Joint Consumer Advocates further state that, while applying the MOPR to self-supply resources in regulated states would result in unjust and unreasonable rates, there is no rational distinction in applying the MOPR to resources receiving out-of-market payments but not to self-supply, which also receive out-of-market cost recovery.[83]

b. Commission Determination

37. We find that an expanded MOPR that applies to new and existing capacity resources that receive, or are entitled to receive, a State Subsidy, unless the resource qualifies for an exemption, as discussed below, is a just and reasonable means to address State Subsidies.[84] PJM's existing MOPR fails to consider whether resource types other than new natural gas-fired resources are offering competitively in the capacity market without the influence of State Subsidies. The record in this proceeding indicates that State Subsidies for both existing and new resources are increasing, especially out-of-

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[80] *Id*. at 9.

[81] *Id*. at 14.

[82] Joint Consumer Advocates Initial Testimony at 13; Joint Consumer Advocates Reply Testimony at 6-7.

[83] Joint Consumer Advocates Reply Testimony at 6.

[84] PJM Tariff, App. DD, § 1 (stating, among other things, that the RPM provides the forward commitment of resources to ensure reliability in future delivery years); *see also* CASPR Order, 162 FERC ¶ 61,205 at P 21 (a capacity market should "produce a level of investor confidence that is sufficient to ensure resource adequacy at just and reasonable rates").

38. market state support for renewable and nuclear resources.[85] The June 2018 Order thus found PJM's existing MOPR provisions unjust and unreasonable and unduly discriminatory because they failed to protect the "integrity of competition in the wholesale capacity market against unreasonable price distortions and cost shifts caused by out-of-market support to keep existing uneconomic resources in operation, or to support the uneconomic entry of new resources, regardless of generation type or quantity of the resources supported by such out-of-market support."[86]

39. In response to arguments that PJM's MOPR was designed to address monopsony power and is therefore not well suited to address State Subsidies, we disagree. A purpose of the MOPR has been to address price suppression.[87] Consistent with that policy, the Commission accepted PJM's proposal to eliminate the state mandate exemption in 2011, because state sponsorship of uneconomic new entry can produce unjust and unreasonable rates by artificially suppressing capacity prices.[88] This order does not, therefore, change the purpose of the MOPR, but only changes its scope in response to new efforts to provide State Subsidies to existing resources, or increased support for other types of new resources, that threaten to depress market clearing prices below competitive levels. If a seller believes that the default offer price floor for its resource type is not representative of its resource's costs, the seller may apply for a Unit-Specific Exemption, as described below (see IV.D.5).

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[85] *See* June 2018 Order, 163 FERC ¶ 61,236 at PP151-155 (discussing evidence of growing state subsidies); *see also* Calpine Initial Comments at 3. States have also passed bills subsidizing resources since the June 2018 Order. *See supra* note 55 (describing recent legislation).

[86] June 2018 Order, 163 FERC ¶ 61,226 at P 150.

[87] *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331 at P 34 (explaining that the MOPR would apply to sellers that "may have incentives to depress market clearing prices below competitive levels").

[88] *E.g.*, 2011 MOPR Order, 135 FERC ¶ 61,022 at P 141 (accepting PJM's proposal to eliminate the state mandate exemption, stating that uneconomic entry can produce unjust and unreasonable rates by artificially suppressing capacity prices), *aff'd sub nom. NJBPU*, 744 F.3d at 97-102.

40. We further disagree with intervenors that an expanded MOPR will increase the risk of market participants exercising supplier-side market power. This speculative concern is not sufficiently supported in the record of this proceeding. Further, there are existing provisions in PJM's Tariff to address supplier-side market power. We also reject Illinois AG's proposal to require the release of offer data. Offer data is sensitive commercial information, which we decline to make generally available.[89]

41. As to arguments that an expanded MOPR will unjustly and unreasonably increase costs to consumers, courts have directly addressed this point, holding that states "are free to make their own decisions regarding how to satisfy their capacity needs, but they 'will appropriately bear the costs of [those] decision[s],' . . . including possibly having to pay twice for capacity."[90] States have the right to pursue policy interests in their jurisdictions. Where those state policies allow uneconomic entry into the capacity market, the Commission's jurisdiction applies, and we must ensure that wholesale rates are just and reasonable.[91] The replacement rate directed in this order will enable PJM's capacity market to send price signals on which investors and consumers can rely to guide the orderly entry and exit of economically efficient capacity resources.

42. Finally, while this order largely focuses on the changes we are requiring to PJM's MOPR, we clarify that the MOPR will continue to apply to new natural gas-fired combustion turbine and combined cycle resources. Although the June 2018 Order focused on State Subsidies, the order nonetheless recognized that new natural gas-fired resources remain able to suppress capacity prices.[92] We find that this record has not demonstrated a need to eliminate the existing MOPR and so the MOPR should continue to apply to new natural gas-fired resources, regardless of whether they receive State Subsidies.

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[89] *See, e.g.*, 5 U.S.C. § 552(b)(4) (2018) (exempting from mandatory disclosure trade secrets and confidential commercial and financial information); 18 C.F.R. § 388.107(d) (2019)..

[90] *NJBPU*, 744 F.3d at 96-97 (quoting *Connecticut PUC*, 569 F.3d at 481).

[91] *See NJBPU*, 744 F.3d at 100 (affirming the Commission's decision to eliminate the state mandate exemption because "below-cost entry suppresses capacity prices…[the Commission is] statutorily mandated to protect the [PJM capacity auction] against the effect of such entry"); *see also supra* note 23 (listing relevant Commission and judicial precedent).

[92] June 2018 Order, 163 FERC ¶ 61,236 at PP 151, 155.

2. Resources Subject to the Expanded MOPR

a. PJM's Proposal

43. PJM proposes that demand resources and generation capacity resources, existing and planned, internal and external, that meet certain materiality criteria will be considered material resources that are subject to the MOPR.[93] PJM also proposes a number of exclusions. PJM proposes to exclude a generation resource for which "electricity production is not the primary purpose of the facility at which the energy is produced, but rather . . . is a byproduct of the resource's primary purpose."[94] PJM notes that such resources include those fueled by landfill gas, wood waste, municipal solid waste, black liquor, coal mine gas, or distillate fuel oil. PJM asserts that it is appropriate to exempt such resources because energy production is only a byproduct of these resources' primary economic purpose.[95] PJM also proposes to exclude energy efficiency resources, asserting that energy efficiency "resources are generally the result of a focus on reduced consumption and energy conservation, which are on the demand side of the equation, and do not raise price suppression concerns."[96]

b. Intervenor Positions

44. With regard to PJM's proposal to exclude resources whose primary purpose is not energy production, some intervenors support PJM's proposal.[97] For example, Microgrid requests that PJM's proposed exemption be expanded to cover any resource with a primary purpose other than the production of wholesale electricity (i.e., sale for resale), arguing that microgrid operations often reflect a combination of purposes, with wholesale

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[93] PJM Initial Testimony at 15; proposed Tariff, Att. DD, § 5.14(h)(ii)(a). PJM's proposed materiality thresholds are discussed *infra* IV.B.

[94] *Id*. at 19.

[95] *Id*.

[96] *Id*. at 15 n.20; *see* proposed Tariff at Att. DD, § 5.14(h)(ii)(A) (limiting the term Capacity Resource with Actionable Subsidy, in relevant part, to a "Demand Resource or a Generation Capacity Resource, or uprate or planned uprate, to a Generation Capacity Resource[.]").

[97] PJM Consumer Representatives Reply Testimony at 5-6; IMEA Reply Testimony at 12.

power production as "value added" to those purposes.[98] At a minimum, Microgrid requests that the asset-backed demand resources such as microgrids be included in the exemption for resources for which electricity production is not the primary purpose of the facility.[99] Others oppose PJM's proposed exemption for resources not primarily engaged in energy production.[100] Joint Consumer Advocates argue that the purpose for which a facility exists is irrelevant to whether it poses a price suppression risk.[101]

45. AEE argues that seasonal resources should be exempt from the MOPR, because they have different economics than annual capacity resources and do not rely on clearing the capacity market to enter the PJM market or to stay in operation.[102] AEE contends that these resources have widely varying business models and reasons for offering at a certain level, and that, as such, it would be difficult to develop a reasonable default offer price floor to apply.[103] Further, AEE contends that the decision to offer seasonally and forgo six months of capacity revenue indicates that these resources are economic based on their revenue from other markets.[104]

46. DC Commission argues that seasonal demand response should be exempt from the MOPR because it is not a Capacity Performance resource.[105] To the extent some of its demand response is subject to the MOPR because it matches in the capacity auction to become an annual product, DC Commission requests the Commission exempt it from the

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[98] Microgrid Reply Testimony at 13. These purposes may include: "cost effective self-supply, thermal and electric applications, the ability to island included load and the related resiliency benefits, and environmental performance." *Id*.

[99] *Id*.

[100] Talen Reply Testimony at 5; *see also* Joint Consumer Advocates Reply Testimony at 5-6.

[101] Joint Consumer Advocates Reply Testimony at 5-6.

[102] AEE Initial Testimony at 23; *see also* Maryland Commission Reply Testimony at 9.

[103] AEE Initial Testimony at 24.

[104] *Id*. at 24-25.

[105] DC Commission Initial Testimony at 4; *see also* Maryland Commission Initial Testimony at 12.

47. MOPR.[106] DC Commission submits that almost all PJM states have demand response programs that partially rely on PJM's capacity market as a benefit, and subjecting these programs to a MOPR would increase prices in the long term.[107] The Maryland Commission similarly argues that seasonal resources should be exempt because the total amount of winter-only capacity resources that typically aggregate with summer-only demand response and energy efficiency capacity resources is low RTO-wide and would strand these summer capacity resources, which are important elements of federal and state energy policies. The Maryland Commission thus requests that resources that offer capacity into the BRA for the purpose of aggregating with seasonal resources should be exempt from the MOPR.[108]

48. In response to the Maryland Commission's request, PJM asserts that seasonal aggregated resources, which are currently composed entirely of wind resources, should be able to clear the BRA because PJM's proposed default offer price floor for existing wind resources is zero dollars. PJM further submits that the appropriate place to address the aggregation of seasonal resources is in Docket Nos. EL17-32-000 and EL17-36-000.[109]

49. Some intervenors argue that first-of-a-kind technologies should be exempt from the MOPR.[110] The Maryland Commission asserts that subsidized emerging technologies have the potential to pave the way for other future developments that could spur competition and benefit ratepayers across the PJM region without the need for further subsidization.[111] The Maryland Commission contends that such projects are few and merit exemption from a MOPR.[112] The Maryland Commission argues that, because such subsidies are not specifically targeted for the interest of the sponsoring state and provide benefits to the entire PJM region, the Commission should allow an RTO-wide exemption for the first 375 MW, per resource type, of all planned or existing resources that are first-

[106] DC Commission Initial Testimony at 5; *see also* DC Consumers Counsel Initial Testimony at 10-11.

[107] DC Commission Initial Testimony at 7.

[108] Maryland Commission Initial Testimony at 12.

[109] PJM Reply Testimony at 16.

[110] DC People's Counsel Initial Testimony at 10-11; Maryland Commission Initial Testimony at 12-13; Joint Consumer Advocates Initial Testimony at 14.

[111] Maryland Commission Initial Testimony at 12-13.

[112] *Id*. at 13.

of-a-kind developments in PJM.[113] The Maryland Commission asserts that a total amount of 375 MW will have a *de minimis* impact on PJM's capacity market and could serve to fuel future competition that is valued in competitive markets.[114] The Joint Consumer Advocates support an exemption for innovative technology up to 350 MW.[115] AEE agrees that a broadly expanded MOPR could prevent new advanced energy technologies from participating in the markets and create disincentives to innovation.[116]

c. **Commission Determination**

50. We find that PJM must apply the MOPR to all new and existing, internal and external, State-Subsidized Resources that participate in the capacity market, regardless of resource type, with certain exemptions described *infra* section IV.D.[117]

51. We disagree that capacity resources that receive or are entitled to receive a State Subsidy and whose primary purpose is not electricity production should be categorically exempt from the MOPR. We find no reason to distinguish capacity resources based on whether they primarily exist to produce energy or produce energy as a byproduct of another function, like burning waste.[118] The type of resource is immaterial if the resource receives a State Subsidy and thus has the ability to suppress capacity prices.

52. We find that seasonal resources are properly considered capacity resources and should be subject to the MOPR if they receive or are entitled to receive a State Subsidy and do not qualify for one of the exemptions discussed in this order. A seasonal resource receiving a State Subsidy has the same ability to affect capacity prices as other State-Subsidized Resources and thus there is no reason to distinguish between resources. We disagree with AEE that PJM's Tariff should exempt seasonal resources from the MOPR because their widely varying business models may make it administratively difficult to develop an appropriate default offer price floor to be applied to these resources. We

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[113] *Id.*

[114] *Id.*

[115] Joint Consumer Advocates Initial Testimony at 14.

[116] AEE Initial Testimony at 5.

[117] June 2018 Order, 163 FERC ¶ 61,236 at P 158. Capacity resource, as used in this order, means all resource types that seek to participate in PJM's capacity market.

[118] However, as discussed *infra*, federally-mandated sales of energy and capacity by Qualifying Facilities do not fall under our defined term of State Subsidy. S*ee infra* note 143.

address default offer price floors in IV.C below. If a seasonal resource is able to make an economic offer without reliance on a State Subsidy, that resource may apply for the Unit-Specific Exemption, or it may forego any State Subsidy to qualify for the Competitive Exemption.

53. We also find it is unnecessary to categorically exempt seasonal resources that receive or are entitled to receive State Subsidies based on AEE's characterization of seasonal resources as categorically "economic" because they forego six months of capacity market income or otherwise do not rely on capacity market revenues to stay in business. Rather, AEE's argument only demonstrates that no separate exemption is needed, because such a resource could qualify for a Unit-Specific Exemption, or it may forego any State Subsidy to qualify for the Competitive Exemption. Nor are we persuaded that seasonal resources should be exempt from the MOPR either because the total MW level of winter-only capacity resources that aggregate is low or that seasonal demand response resources are not Capacity Performance resources. As the purpose of the expanded MOPR is to limit the influence of State Subsidies on PJM's multi-state wholesale capacity market, we affirm that each capacity resource with a State Subsidy—including seasonal resources—must be subject to an appropriate default offer price floor for its resource type unless it qualifies for one of the exemptions discussed in this order.

54. We disagree with PJM's proposal to exclude energy efficiency resources while also proposing to include demand resources. PJM provides no rationale for treating these resource types differently with respect to the expanded MOPR, as both modify demand and are represented on the supply side. We therefore find that the expanded MOPR should apply to energy efficiency resources, as well as demand response, when either of those types of resources receive or is entitled to receive a State Subsidy, unless they qualify for one of the exemptions described in this order. We also find that capacity storage resources and emerging technology should be subject to the applicable default offer price floor if they receive, or are entitled to receive a State Subsidy, unless they qualify for one of the exemptions described in this order. We address the specific default offer price floors for these resources in section IV.C. However, as discussed in section IV.D below, we direct PJM to include an exemption for existing demand response, energy efficiency, and capacity storage resources. All resources that participate in the PJM capacity market – including demand response, energy efficiency, storage, cogeneration, and seasonal resources – can impact the competitiveness of the capacity market and the resource adequacy it was designed to address.

3. Subsidies Subject to the Expanded MOPR

a. PJM's Proposal

55. Subject to certain exemptions addressed below, PJM proposes to subject resources receiving a Material Subsidy to the MOPR. PJM proposes to define a "Material Subsidy" to include: "(1) material payments, concessions, rebates, or subsidies as a result of any

state-governmental action connected to the procurement of electricity or other attribute from an existing Capacity Resource, or the construction, development, or operation, (including but not limited to support that has the effect of allowing the unit to clear in any [PJM capacity auction]) of a Capacity Resource, or (2) other material support or payments obtained in any state-sponsored or state-mandated processes, connected to the procurement of electricity or other attribute from an existing Capacity Resource, or the construction, development, or operation, (including but not limited to support that has the effect of allowing the unit to clear in any [PJM capacity auction]), of the Capacity Resource."[119]

56. PJM further proposes to apply its expanded MOPR to internal and external capacity resources receiving state subsidies where the relevant seller, among other things, "is entitled to a Material Subsidy with regard to such Capacity Resource and the [seller] has not certified that it will forego receiving any Material Subsidy for such Capacity Resource during the applicable Delivery Year, or the [seller] has received a Material Subsidy with regard to such Capacity Resource and yet to clear any RPM Auction since it received Material Subsidy."[120]

57. In its Answer, PJM asserts that, under its proposed definition of a subsidy subject to the expanded MOPR, the subsidy need not be explicitly stated or captured in a distinct rate; the expanded MOPR, rather, would cover any state-directed procurement that includes a non-bypassable charge or other rate to retail customers imposed by law or regulation.[121] PJM also clarifies that a bilateral transaction for capacity and/or other attributes that is not state-directed and/or that does not result in a non-bypassable charge to consumers would not be considered a Material Subsidy.[122]

b. <u>Intervenor Positions</u>

58. Several intervenors argue that PJM's MOPR should be targeted to only address resources and subsidies that intend to suppress, or are capable of suppressing, market clearing prices.[123] Some intervenors argue similarly that the MOPR should only target

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[119] PJM Initial Testimony at 19-20; *see* proposed Tariff, § 1 – New Definitions (Material Subsidy). We address PJM's proposed provisions with respect to federal subsidies *infra* IV.A.5.

[120] PJM Initial Testimony at 25-28; *see* proposed Tariff, Att. DD, § 5.14(h)(vi).

[121] PJM Answer at 18.

[122] *Id*. at 20-21.

[123] *See, e.g.*, Brookfield Reply Testimony at 6-7.

subsidies that have been shown to materially affect capacity offers,[124] or only address those subsidies that affect the market in the manner suggested in the June 2018 Order, meaning subsidies provided by states for the purpose of supporting the entry or continued operation of preferred generation resources that may not otherwise be able to succeed in a competitive wholesale capacity market.[125]

59. Clean Energy Industries argue that state policies that utilize competitive bidding processes should not be considered "actionable subsidies" because such competitive processes do not create revenue certainty and do not reasonably impact capacity market bidding behavior.[126] Similarly, AEE argues that a MOPR exemption should be provided for capacity resources that receive out-of-market revenues through a state policy or program that selects resources through a competitive process, including resources winning an all-source, technology-neutral request for proposals that meets the Commission's previously-established standards for competitive solicitations.[127]

60. ELCON argues that if the Commission pursues an expanded MOPR, it should limit the qualifying characteristics of an actionable subsidy only to the types and degrees of subsidization that fundamentally compromise competitive markets.[128] ELCON suggests actionable subsidies should be: (i) government sanctioned payments funded by compulsory charges on electricity consumers; (ii) guaranteed payments (i.e., not obtained through a competitive program); and (iii) resource- or company-specific payments.[129]

61. AEP/Duke argue that the retail rider approved by the Ohio Commission for AEP's affiliate and the Dayton Power & Light Company, and a pending retail rider for Duke's

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[124] *See, e.g.*, AEE Initial Testimony at 9; Clean Energy Industries Initial Testimony at 3; OPSI Initial Testimony at 14; AEP/Duke Reply Testimony at 10-12; ELCON Initial Testimony at 5-6.

[125] AEP/Duke Initial Testimony at 4 (citing June 2018 Order, 163 FERC ¶ 61,236 at P 1); *see also* AEE Initial Testimony at 3; Clean Energy Industries Reply Testimony at 4.

[126] Clean Energy Industries Initial Testimony at 21.

[127] AEE Initial Testimony at 22.

[128] ELCON Initial Testimony at 5.

[129] *Id*. at 5-6.

affiliate, should not be treated as a subsidy that is subject to PJM's MOPR.[130] AEP/Duke assert that the retail rate riders are not a subsidy because they are not related to any state policy goals support the entry or continued operation of preferred generating resources.[131]

62. Some intervenors support PJM's proposal to apply the expanded MOPR to resources that are "entitled to a Material Subsidy[.]"[132] Other intervenors oppose PJM's proposal. Avangrid argues that focusing on an entitlement to receive a Material Subsidy would inappropriately extend the MOPR to resources that do not actually receive a Material Subsidy. Avangrid further asserts that such a definition fails to comply with the requirements of the June 2018 Order, which uses some form of the verb "receive" in discussing out-of-market revenue or state support.[133] Several intervenors argue that the language will permit over-mitigation because resources may be eligible for a subsidy but not guaranteed to receive it.[134]

63. Other intervenors assert that a resource that receives an actionable subsidy after the window to certify that it is receiving such a subsidy should be permitted to participate in the BRA as if it did not receive the actionable subsidy, as such a resource would lack adequate time to prepare to be an RCO resource.[135]

64. The Joint Consumer Advocates state that, if the MOPR is expanded, it should apply only to resources that are receiving support or have received assurances of support and only for the duration of time that they are receiving qualifying payments.[136]

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[130] AEP/Duke Initial Testimony at 5; AEP/Duke Reply Testimony at 12-15; *see also* Buckeye Reply Testimony at 7-8 (agreeing that the retail rate riders simply continue the long-standing and unique OVEC arrangements, which are largely owned by self-supply entities).

[131] AEP/Duke Initial Testimony at 6.

[132] *See, e.g.*, API Reply Testimony at 21-22; New Jersey Board Reply Testimony at 16-17; Policy Integrity Initial Testimony at 6.

[133] Avangrid Initial Testimony at 11-12.

[134] *Id*. at 17; Avangrid Reply Testimony at 17-18; DC People's Counsel Initial Testimony at 8; Clean Energy Industries Reply Testimony at 14-15; Clean Energy Industries Initial Testimony at 17-18 (arguing speculative revenues do not materially impact offers).

[135] PSEG Reply Testimony at 17-18; New Jersey Board Initial Testimony at 21.

[136] Joint Consumer Advocates Initial Testimony at 8-9, 11.

65. Some intervenors argue that out-of-market subsidies should exclude purely private and voluntary transactions, including voluntary bilateral capacity contracts outside the market.[137] Illinois Commission recommends that the Commission not treat payments, assurances, or other such benefits provided by taxpayers, rather than by electricity consumers, as actionable subsidies.[138]

66. Policy Integrity argues that revenue resources receive from externality payments, such as ZEC and RPS programs, are not distinguishable from other revenues received outside of the markets, including coal ash sales, steam heat sales, voluntary Renewable Energy Credits (RECs), emission allowances, or fossil fuel subsidies. Policy Integrity argues that these sources of revenue compensate resources for products and services that are not FERC-jurisdictional, just as RPS and ZEC programs do, and affect capacity market bidding behavior the same way as other out-of-market revenue, but have coexisted with capacity markets for years.[139] Policy Integrity contends the Commission has recognized that revenues a resource receives outside of jurisdictional markets are not necessarily distortionary.[140] Because revenues from RPS programs and ZECs are similar to the payments the Commission has found are not distortionary, Policy Integrity argues they should be treated in the same way.[141]

c. <u>Commission Determination</u>

67. Based on the evidence presented in this paper hearing, we find that PJM's MOPR must be expanded to permit the review and mitigation of capacity offers by resources that receive or are eligible to receive State Subsidies.[142] Specifically, the term State Subsidy will be defined as follows:

> A direct or indirect payment, concession, rebate, subsidy, non-bypassable consumer charge, or other financial benefit that is (1) a

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[137] Illinois Commission Reply Testimony at 22-23; ELCON Initial Testimony at 7 (noting that corporate consumers are increasingly deploying their own capital to voluntarily purchase power through the bilateral market or procure RECs); AES Initial Testimony at 19-20.

[138] Illinois Commission Reply Testimony at 22.

[139] Policy Integrity Initial Testimony at 27-33.

[140] *Id.* at 32-33 (citing 2011 MOPR Order, 137 FERC ¶ 61,145 at PP 242-44).

[141] *Id.* at 33.

[142] *See* June 2018 Order, 163 FERC ¶ 61,236 at P 158.

> result of any action, mandated process, or sponsored process of a state government, a political subdivision or agency of a state, or an electric cooperative formed pursuant to state law, and that (2) is derived from or connected to the procurement of (a) electricity or electric generation capacity sold at wholesale in interstate commerce, or (b) an attribute of the generation process for electricity or electric generation capacity sold at wholesale in interstate commerce, or (3) will support the construction, development, or operation of a new or existing capacity resource, or (4) could have the effect of allowing a resource to clear in any PJM capacity auction.[143]

68. This definition focuses on those forms of "out-of-market payments provided or required by certain states"[144] that, even in the absence of facial preemption under the FPA, squarely impact the production of electricity or supply-side participation in PJM's capacity market by "supporting the entry or continued operation of preferred generation resources that may not otherwise be able to succeed in a competitive wholesale capacity market."[145] This definition is not intended to cover every form of state financial assistance that might indirectly affect FERC-jurisdictional rates or transactions; nor is it intended to address other commercial externalities or opportunities that might affect the economics of a particular resource. Rather, our concern is with those forms of State Subsidies that are not federally preempted, but nonetheless are most nearly "directed at"[146] or tethered to[147] the new entry or continued operation of generating capacity in the federally-regulated multi-state wholesale capacity market administered by PJM. Consistent with court precedent, a State Subsidy need not be facially preempted to

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[143] Although the Public Utility Regulatory Policies Act of 1978 (PURPA) is implemented by states, it is implemented pursuant to federal law and the Commission's regulations and thus federally-mandated sales of energy and capacity by Qualifying Facilities do not fall under our defined term of State Subsidy.

[144] June 2018 Order at P 1 & n.1.

[145] *Id*.

[146] *Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1602 (2015).

[147] *Cf. Hughes*, 136 S. Ct. at 1299 (2016) ("Nothing in this opinion should be read to foreclose Maryland and other States from encouraging production of new or clean generation through measures 'untethered to a generator's wholesale market participation.'") (citation omitted).

require corrective action by this Commission.[148] As we have explained, our statutory mandate requires the Commission to intervene "when subsidized [resources] supported by one state's or locality's policies has the effect of disrupting the competitive price signals that PJM's [capacity auction] is designed to produce, and that PJM as a whole, including other states, rely on to attract sufficient capacity."[149]

69. For similar reasons, we disagree with Policy Integrity's argument that revenues they describe as externality payments, such as ZEC and RPS programs, are not distinguishable from certain other revenues received outside of the markets. We reiterate that if an out-of-market payment meets the definition of State Subsidy above—including ZEC and RPS programs— then the State-Subsidized Resource is subject to the default offer price floor. The definition of State Subsidy we adopt here—which leans heavily on language the PJM stakeholders reviewed and developed—is sufficiently clear and specific to be understood by PJM and its stakeholders.[150]

70. As to whether private, voluntary bilateral transactions might raise inappropriate subsidy concerns, we find that the record in the instant proceeding does not demonstrate a need to subject voluntary, arm's length bilateral transactions to the MOPR at this time.[151] We find that the expanded MOPR, as adopted herein, will sufficiently address resources receiving State Subsidies to keep existing uneconomic resources in operation, or to support the uneconomic entry of new resources.

71. We reject AEP/Duke's request to exclude retail rate-riders as a State Subsidy.[152] As described by AEP/Duke, the state-approved rate riders pass through the costs, or credits, associated with a wholesale purchase power agreement based on revenues from

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[148] *See Elec. Power Supply Ass'n v. Star*, 904 F.3d 518, 524 (7th Cir. 2018) (holding that the Illinois ZEC program is not preempted and explaining that this holding did not change whether, in this replacement rate proceeding, the Commission may "need to make adjustments in light of states' exercise of their lawful powers").

[149] 2011 MOPR Rehearing Order, 137 FERC ¶ 61,145 at P 3; *see supra* note 23 (listing cases).

[150] In addition, several of the items listed by Policy Integrity are addressed separately by our specific holdings with respect to voluntary RECs, *see infra* P 176, and federal subsidies, *see supra* P 10; *infra* P 89.

[151] The treatment of voluntary REC arrangements under the expanded MOPR is discussed in IV.D.1 below.

[152] Unless such resource receiving the retail rate rider qualifies for an exemption.

the PJM capacity market.[153] As a general matter, we find that it is reasonable to include non-bypassable revenue arrangements or rate riders as State Subsidies because the riders are connected to the procurement of electricity or electric generation capacity sold at wholesale or support the construction, development, or operation of new and existing capacity resources.

72. We reject intervenors' argument that mitigation under the expanded MOPR should only be triggered if the out-of-market support received by a resource can be demonstrated to actually allow a resource to uneconomically enter or remain in the market, thereby suppressing prices. Consistent with Commission precedent, the June 2018 Order is premised on the finding that, as a general matter, resources receiving out-of-market support are capable of suppressing market prices.[154] We continue to uphold that finding here. It would turn that finding on its head to require PJM and the Market Monitor to determine for each and every resource receiving a State Subsidy whether that subsidy actually allows a resource to uneconomically enter or remain in the market, thereby allowing the resource to suppress prices.

73. However, we agree with intervenors who argue that the MOPR should take into account the competitiveness of State-Subsidized Resources. It will. A resource can demonstrate that its offer is competitive through the Unit-Specific Exemption (see *infra* IV.D.5) process, or certify to PJM that will forego any State Subsidy under the Competitive Exemption (see *infra* IV.D.1). Because the goal of the MOPR is to ensure that resources offer competitively, and a seller may avail itself of the Unit-Specific Exemption process or the Competitive Exemption, it is reasonable to require all resources that receive a State Subsidy to be subject to the MOPR.

74. We agree with intervenor arguments that state policies that utilize competitive bidding processes may not necessarily undermine the market's reliance on competitive price signals to procure economic capacity, and we find that the Unit-Specific Exemption is sufficient to address this scenario. A competitive, fuel-neutral process is designed to select the most economic resources. These resources should already be economic and therefore do not need an exemption. Sellers with resources chosen through such a process will be able to use the Unit-Specific Exemption to demonstrate that their offer is competitive. It is not necessary to create another administrative process to determine which state procurements are competitive in advance–the burden of demonstrating the competitiveness of a given resource's offer should fall on the seller.

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[153] AEP/Duke Initial Testimony at 5-6.

[154] *See* June 2018 Order, 163 FERC ¶ 61,236 at P 155 (citing *ISO New England Inc.*, 135 FERC ¶ 61,029, at PP 170-71 (2011)).

75. We agree with PJM that the MOPR should apply to resources that receive or are "entitled to" receive a State Subsidy. We agree with PJM that a seller shall be considered "entitled to" a State Subsidy if the seller has a legal right or a legal claim to the subsidy, regardless of whether the seller has yet to actually receive the subsidy. We further find that a capacity resource should be considered to be entitled to receive a State Subsidy if the resource previously received a State Subsidy, and has not cleared a capacity auction since that time.

76. We disagree with intervenors' claim that it is inappropriate to mitigate resources that are entitled to a State Subsidy, but may not have actually received a State Subsidy yet. Resources that do not wish to be mitigated or believe they will not actually receive a State Subsidy to which they are entitled may certify to PJM that they will forego any State Subsidy under the Competitive Exemption. Therefore, mitigating offers by resources that receive or are entitled to receive a State Subsidy will only capture resources that are both eligible to receive a subsidy and likely to accept one.

77. Intervenors argue that resources may be entitled, but not guaranteed, to receive payments and should therefore not be mitigated, because speculative revenues do not materially impact capacity market offers. We disagree. We find that no materiality threshold is appropriate, as discussed *infra* IV.B. Allowing resources to enter the capacity market without mitigation and then subsequently accept a State Subsidy for the relevant delivery year would negate the purpose of the MOPR and would be unjust and unreasonable for the reasons outlined in the June 2018 Order.

4. General Industrial Development and Local Siting Support

a. PJM's Proposal

78. PJM proposes to exclude from its definition of Material Subsidy state payments relating to industrial development and local siting. With respect to industrial development, PJM proposes to exclude "payments (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[.]"[155] With respect to local siting, PJM proposes to exclude "payments concessions, rebates, subsidies or incentives designed to incent, or participation in a program, contract or other arrangements from a county or other local government authority using eligibility or selection criteria designed

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[155] Proposed Tariff at Definitions (Material Subsidy), subsection (5).

to incent, siting facilities in that county or locality rather than another county or locality."[156]

79. PJM asserts that subsidies of this sort are appropriately excluded from mitigation because any such payments are unrelated to the production of electricity.[157] PJM argues that, instead, these subsidies are generally aimed at economic development through development of grants, tax credits, and the like. PJM adds that these subsidies have been excluded from the MOPR previously, as part of the categorical exemption for competitive entry in place prior to the *NRG* remand proceeding.[158]

b. Intervenor Positions

80. Some intervenors support excluding subsidies relating to general industrial development and/or siting incentives, arguing that payments, assurances, or other such benefits provided by taxpayers are distinguishable from a payment funded by electricity consumers.[159] Other intervenors oppose PJM's proposal. LS Power argues that any exception for a specific class of resource, or a given type of subsidy program, would be inconsistent with the Commission's recognition that all subsidy programs result in price suppression for the entire market, regardless of intent.[160]

81. Exelon asserts that PJM's MOPR should mitigate any form of out-of-market revenue, regardless of its purpose, including development incentives or siting considerations. Exelon argues that an exception for development and siting incentives is arbitrary and raises the same concern that the Commission has identified regarding transparency and the competitiveness of offers in the capacity market. Exelon points to a Pennsylvania program that eliminated state and local taxes for a coal-to-gas conversion plant through 2023, noting that this tax relief measure allowed a resource to be constructed at lower cost and submit a capacity offer at less than its true going-forward costs.[161]

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[156] *Id*. subsection (6).

[157] PJM Initial Testimony at 23-24.

[158] *Id*. at 24; *see also* 2013 MOPR Order, 143 FERC ¶ 61,090 at P 53.

[159] PJM Consumer Representatives Initial Testimony at 9; OCC Initial Testimony at 6-7.

[160] LS Power Initial Testimony at 9 (citing June 2018 Order, 163 FERC ¶ 61,236 at P 155); *see also* NEI Initial Testimony at 5; PSEG Initial Testimony at 7.

[161] Exelon Initial Testimony at 18.

82. Finally, AES argues that Payments in Lieu of Taxes have the ability to materially impact net going forward costs of capacity resources, and should therefore be treated as subsidies subject to PJM's MOPR.[162]

c. Commission Determination

83. We adopt PJM's proposal to exclude generic industrial development and local siting support from those types of support that will be treated as a State Subsidy for the purposes of the expanded MOPR. We find that PJM's proposed exclusions are reasonable, given that the support at issue is available to all businesses and is not "nearly 'directed at' or tethered to the new entry or continued operation of generating capacity in the federally-regulated multi-state wholesale capacity market administered by PJM."[163]

5. Federal Subsidies

a. PJM's Proposal

84. PJM proposes to exempt from the MOPR resources receiving federal subsidies enacted into law prior to March 21, 2016, the refund effective date established in the Calpine complaint proceeding.[164] Specifically, PJM proposes to apply the MOPR to resources receiving federal subsidies "authorized pursuant to federal legislation or a federal subsidy program enacted *after* March 21, 2016 . . . unless such federal legislation specifically exempts the application of MOPR to the program being authorized pursuant to federal legislation."[165]

85. PJM asserts that the refund effective date is an appropriate cut-off date because the proposal in the Calpine complaint, to apply the MOPR to all resources, provided the first notice to market participants that federal subsidies could be subject to mitigation under PJM's MOPR.[166] PJM adds that, while the Commission's jurisdiction under the FPA should not be construed to countermand other acts of Congress, it is reasonable to assume, prospectively, that Congress is aware of the Commission's authority to address the impacts of federal subsidies on clearing prices in the organized markets and could

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[162] AES Initial Testimony at 20.

[163] *Supra* P 68.

[164] PJM Initial Testimony at 12, 28.

[165] *Id*. at 28.

[166] *Id*. at 28-29.

expressly limit the Commission's ability to address such effects.[167] PJM argues that this expectation is particularly reasonable given recent court decisions confirming the Commission's authority under the FPA to address the impacts of subsidies on wholesale markets.[168]

b. Intervenor Positions

86. Several intervenors support exempting all resources receiving federal subsidies from mitigation.[169] The New Jersey Board argues that federal subsidies should be exempted, because subjecting such subsidies to the MOPR could drastically increase costs for consumers.[170] Clean Energy Advocates generally support PJM's proposal to exclude federal subsidies from the MOPR, if the federal legislation or federal subsidy program at issue was enacted prior to the refund effective date in this proceeding, but would extend the exemption to all federal subsidies adopted prior to a Commission order accepting this aspect of PJM's proposal.[171] On specific federal legislation or subsides, some intervenors oppose applying the MOPR to the Production Tax Credit (PTC), or the Investment Tax Credit (ITC), or U.S. Rural Utilities Service (RUS) financing.[172]

87. Several intervenors urge caution with regard to finding that federal efforts to ensure grid resilience and promote national security are subsidies.[173] By contrast, LS

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[167] *Id*. at 29.

[168] PJM Initial Testimony at 29-30 (citing *Star*, 904 F.3d at 522-24 (holding that the Illinois ZEC program is not preempted and noting the Commission's June 2018 Order); *Coal. for Competitive Elec. v. Zibelman*, 906 F.3d 41, 53-56 (2d Cir. 2018) (holding that the New York ZEC program is not preempted)).

[169] *See, e.g.*, New Jersey Board Initial Testimony at 27-28; ODEC Initial Testimony at 24-25.

[170] New Jersey Board Initial Testimony at 27-28.

[171] Clean Energy Advocates Initial Testimony at 33-34 & n.82.

[172] Clean Energy Industries Initial Testimony at 3, 7-12 (arguing that the ITC and PTC are valid exercises of Congress's ability to further the general welfare through its expansive taxing and spending power, and that the Commission cannot frustrate Congress's broader policy goals to encourage renewables based on the Commission's more limited rate jurisdiction); ACORE Initial Testimony at 3; NOVEC Initial Testimony at 6; NRECA Initial Testimony at 25-26 (explaining that RUS debt is a common form of financing for electric cooperatives to access capital for electric investment).

[173] ACCCE/NMA Initial Testimony at 3-5; *see also* AEE Initial Testimony at 5

Power asserts that any federal program that would provide subsidies to coal or nuclear resources could potentially dwarf the state subsidy programs that the Commission addressed in the June 2018 Order and fatally impair the operation of PJM's capacity market.[174]

88. Finally, some intervenors oppose a MOPR exception for any federal subsidy.[175] EPSA and IPP Coalition argue that mitigating resources receiving federal subsidies is consistent with the Commission's exclusive FPA jurisdiction over wholesale rates and there is no legal grounds for distinguishing between federally subsidized resources and state subsidized resources.[176]

c. <u>Commission Determination</u>

89. The replacement rate will not require mitigation of capacity offers that are supported by federal subsidies. We agree with arguments that subsidies created by federal law distort competitive outcomes in the PJM capacity market in the same manner as do State Subsidies. However, this Commission's authority to set just and reasonable rates is delegated by Congress through the FPA. That statute has the same legal force, and springs from the same origin, as any other federal statute. This Commission may not, therefore, disregard or nullify the effect of federal legislation by finding that it would be unjust, unreasonable, or unduly discriminatory to allow a PJM capacity resource to rely on a federal subsidy that provides the resource with a competitive advantage over other resources Congress has not chosen to assist in the same way.[177] Nor is it this

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(arguing that every energy technology has received some level of government policy support to help it develop and enter the markets); OCC Initial Testimony at 23 (arguing that it would be premature for FERC to address any potential future federal subsidies for grid resilience or fuel security); NRG Initial Testimony at 42-43.

[174] LS Power Initial Testimony at 12.

[175] *See, e.g.*, Brookfield Initial Testimony at 4-5; EPSA Initial Testimony at 16-19; IPP Coalition Initial Testimony at 4, 7-8; FES Initial Testimony at 7-8; LS Power Initial Testimony at 7, 11-12; NRG Initial Testimony at 10, 42-43; PSEG Initial Testimony at 7; API Initial Testimony at 3, 21; P3 Initial Testimony at 10; P3 Reply Testimony at 8; Cogentrix Reply Testimony at 10.

[176] EPSA Initial Testimony at 16-19; IPP Coalition Initial Testimony at 11.

[177] *Morton*, 417 U.S. at 550-51("Where there is no clear intention otherwise, a specific statute will not be controlled or nullified by a general one, regardless of priority enactment."); *Silver*, 373 U.S. at 357 (an appropriate analysis is one that "reconciles the operation of both statutory schemes with one another rather than holding one completely ousted"); *Tug Allie-B*, 273 F.3d at 941 (reiterating general statutory construction canons

Commission's place to require, as PJM has suggested,[178] that Congress must expressly declare that it intends any future federal subsidy to override market rules accepted by the Commission.

B. Materiality Thresholds

1. PJM's Proposals

90. PJM proposes two materiality thresholds under which subsidized resources would not be subject to the MOPR. First, PJM proposes that a resource must have an unforced capacity threshold of greater than 20 MWs to be subject to the MOPR. PJM notes that the Commission has previously accepted a 20 MW materiality threshold, as applicable to the MOPR,[179] Qualifying Facilities,[180] and distinguishing interconnection procedures.[181] PJM argues that its proposed 20 MW threshold appropriately "excludes resources that are too small, individually or collectively, to meaningfully impact price outcomes from the expanded MOPR."[182] PJM adds that, given the relatively low capacity factors attributable to renewable resources, few renewable resources in the PJM region would exceed the 20 MW threshold.[183]

91. Second, PJM proposes to exclude from its definition of Material Subsidy any subsidy that is not "1% or more of the resource's actual or anticipated total revenues from PJM's energy, capacity, and ancillary services markets."[184] PJM explains that the one

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that statutes relating to the same subject matter should be construed harmoniously and, if not, the more recent or specific statute should prevail over the older and more general law).

[178] *See* PJM Initial Testimony at 29-30.

[179] PJM Initial Testimony at 15 (citing 2013 MOPR Order, 143 FERC ¶ 61,090 at P 170).

[180] *Id*. at 16.

[181] *Id*. at 17.

[182] *Id.* at 18.

[183] In other words a renewable resource would need a larger nameplate capacity to have 20 MW of unforced capacity. *Id*. at 17.

[184] *Id*. at 21.

percent materiality threshold is to exclude financial support that is unlikely to raise price suppression concerns.[185]

2. Intervenor Positions

92. Some intervenors support PJM's proposed materiality exemption for resources smaller than 20 MW of unforced capacity, arguing that small resources are unlikely to have a meaningful impact on capacity clearing prices in PJM and should not be subject to the MOPR.[186] ACORE states that it would be administratively burdensome with little benefit to apply the MOPR to resources smaller than 20 MW unforced capacity.[187] AEE argues that investments in smaller distributed energy resources are typically undertaken for reasons unrelated to capacity market participation and there is no evidence that distributed energy resources are likely to engage in uneconomic offer strategies or meaningfully suppress prices.[188] Microgrid generally supports the 20 MW threshold but asserts that microgrids that wish to participate in the RPM should be permitted to offer a combination of assets up to the 20 MW threshold without being subject to the MOPR (and subsequently to be able to select a different combination to fulfill the same commitment).[189]

93. Other intervenors support the concept of a materiality threshold, but urge the Commission to impose a higher threshold than PJM's proposal. AES proposes that, since many renewable resources are limited in the actual amount of capacity they can offer into the capacity market, increasing the threshold to 40 MW or 50 MW would create an appropriate safe harbor.[190]

94. Others intervenors oppose a 20 MW materiality threshold, arguing that the aggregate number of small resources can have large impacts on markets and that all

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[185] *Id*.

[186] Clean Energy Industries Initial Testimony at 3, 22-23; DC People's Counsel Initial Testimony at 10; ACORE Initial Testimony at 3; IMEA Reply Testimony at 12; Joint Consumer Advocates Initial Testimony at 14; Microgrid Reply Testimony at 12-13; Pennsylvania Commission Reply Testimony at 13; AEE Initial Testimony at 18.

[187] ACORE Initial Testimony at 3.

[188] AEE Initial Testimony at 18.

[189] Microgrid Reply Testimony at 12-13.

[190] AES Initial Testimony at 19; *see also* Joint Consumer Advocates Initial Testimony at 14.

resources should follow market rules, regardless of size.[191] Exelon argues that such a threshold will exempt a significant number of renewable projects, which is contrary to the June 2018 Order's directive to protect PJM capacity prices from the impact of any resource receiving out-of-market support.[192] Exelon contends that the threshold will invite gamesmanship and needless litigation as resource owners attempt to qualify for exemption under the threshold.[193] PSEG argues that the 20 MW threshold is too high, as many state policy supported resources are small and can be easily added or uprated in small increments that would avoid tripping the proposed 20 MW threshold in any given year or at any single site, while adding up to a considerable amount of capacity over time.[194]

95. On PJM's proposed revenue threshold, a number of intervenors generally support a revenue threshold, including PJM's proposed threshold of excluding from review resources receiving a subsidy that is not one percent or more of the resources' actual or anticipated total PJM revenues.[195] Other intervenors argue that PJM's proposed one percent threshold value is too small, or not sufficiently targeted. AES argues that a higher threshold of fifteen percent out-of-market revenue relative to annual total projected revenue should be adopted, asserting that subsidies resulting in less than this fifteen percent threshold do not threaten competitive bidding because the out-of-market support is far less likely to affect how the resource would be offered into the capacity market.[196] PJM Consumer Representatives propose a revenue threshold equal to or

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[191] *See, e.g.*, Exelon Initial Testimony at 20-21; Exelon Reply Testimony at 60-61; Talen Reply Testimony at 5; Market Monitor Reply Testimony at 5; LS Power Reply Testimony at 8-9. Exelon asserts that allowing 40 different 20 MW wind farms to offer as price takers would have the same impact as allowing one 800 MW nuclear unit to do so, and there is therefore no basis for allowing one and not the other. Exelon Initial Testimony at 20-21.

[192] Exelon Reply Testimony at 61.

[193] Exelon Initial Testimony at 21.

[194] PSEG Initial Testimony at 7.

[195] ACORE Initial Testimony at 3; DC People's Counsel Initial Testimony at 10; Joint Consumer Advocates Initial Testimony at 14 (also encouraging the Commission to consider whether a higher threshold is necessary); PSEG Initial Testimony at 6; Exelon Initial Testimony at 5 (arguing that any resource receiving out-of-market payments that, *taken together*, exceed one percent of the revenues the resource would expect to receive in the PJM markets should be subject to the MOPR).

[196] AES Initial Testimony at 16. AES further asserts that, using a $150 MW-day capacity value and $26 MW-day estimated energy and ancillary services revenue, as set

greater than fifteen percent of Net CONE * B,[197] i.e., treating as a Material Subsidy any such subsidy that is equal to, or exceeds, this threshold.[198]

96. Clean Energy Advocates oppose PJM's proposed one percent revenue threshold, arguing that PJM's focus on whether an incentive is large relative to the resource's revenue not only ignores whether the government action at issue affects a single resource or an entire fleet, but also ignores the absolute value of the incentive. Clean Energy Advocates note that it is illogical to assume that a subsidy slightly over one percent of a 20 MW resource's revenue could have a more significant market impact than a subsidy slightly under one percent of a 1,000 MW resource's revenue. Clean Energy Advocates argue that incentives that are not certain or not likely to be significant enough to impact a resource's bid and those that are small in an absolute sense should not be subject to the MOPR, since those incentives are unlikely to significantly change market outcomes.[199]

97. Clean Energy Advocates conclude that an expanded MOPR should only be applied to policies that have the highest absolute magnitude impact on the greatest total capacity of resources.[200] The New Jersey Board argues that PJM's one percent revenue threshold proposal should be rejected as unsupported, asserting that PJM has not shown that a resource would modify its sell offer based on a state subsidy it has received equal to 1.1 percent of that resource's actual or anticipated market revenues.[201]

3. <u>Commission Determination</u>

98. We decline to adopt PJM's proposed materiality thresholds. A materiality threshold implies that there is a threshold under which a State-Subsidized Resource participating in the capacity market has a *de minimis* effect on capacity prices. The June

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forth in PJM's Initial Testimony, a one percent threshold would mean that a new combustion turbine unit receiving a subsidy as small as $2/MW-day would be subject to a $355/MW-day MOPR that is more than twice as large as clearing prices in PJM's past capacity auctions. AES Reply Testimony at 6.

[197] Under the Capacity Performance construct, Net CONE * B represents the opportunity cost of taking on a capacity payment. *See PJM Interconnection, LLC*, 151 FERC ¶ 61,208 at P 338 n.283 (2015).

[198] PJM Consumer Representatives Initial Testimony at 9.

[199] Clean Energy Advocates Initial Testimony at 2.

[200] *Id*. at 32-33.

[201] New Jersey Board Initial Testimony at 16.

2018 Order found that PJM's Tariff failed to protect the capacity market from State-Subsidized Resources, regardless of the amount of out-of-market support received, because out-of-market support at any level is capable of distorting capacity market prices.[202] The Commission noted specifically the expected future increase in support for renewable resources,[203] many of which would be exempt from the expanded MOPR under PJM's proposed capacity threshold. As some intervenors point out, the aggregate impact of small resources can create unjust and unreasonable rates, not just a single resource under 20 MWs.[204] Since, on aggregate, small State-Subsidized Resources may have the ability to impact capacity prices, adopting a materiality threshold would undermine the very purpose of our action here.

99. Furthermore, if a State Subsidy is so small as to be arguably immaterial, then the resource's offer should be competitive without it. And, a resource owner may apply for a Unit-Specific Exemption to justify an offer below the default offer price floor. A resource owner may also choose to forego a State Subsidy under the Competitive Exemption in favor of unmitigated participation in the capacity market.

C. MOPR Offer Price Floors

1. PJM's Proposal

100. Under PJM's proposal, the determination of the default offer price floor would depend on whether the material resource: (i) is a generation resource or a demand resource; (ii) has previously cleared in an RPM auction; or (iii) has been subject to PJM's proposed carve-out allowance since it last cleared an RPM auction.[205]

101. For resources that have not previously cleared a capacity auction, PJM proposes to retain the historical approach of setting the default offer price floor at Net CONE, i.e., at a level equal to the cost of new entry for each resource type, net of the resource type's estimated energy and ancillary services markets revenues.[206] PJM proposes to include its

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[202] June 2018 Order, 163 FERC ¶ 61,236 at P 150.

[203] *Id*. P 151.

[204] *E.g.*, Exelon Initial Testimony at 20-21; Market Monitor Reply Testimony at 5.

[205] PJM proposed Tariff, Att. DD, § 5.14(h)(iv)(A).

[206] PJM Initial Testimony at 38-39. PJM notes that these values would be based on information from a database of the National Renewable Energy Laboratory, https://atb.nrel.gov, and include overnight capital costs and the fixed operating and maintenance expense for nuclear, coal, hydro, solar photovoltaic, onshore wind, and offshore wind technologies, as projected for 2022. PJM adds that combined cycle and

default values in its Tariff, subject to annual adjustment and PJM's quadrennial review of its Variable Resource Requirement (VRR) Curve and CONE values.[207]

102. PJM proposes to calculate its default energy and ancillary services revenue estimates based on historic revenues.[208] To calculate the MOPR offer price floor for demand resources that have not previously cleared, PJM proposes to apply the historical average of all demand resource offers submitted in the last three BRAs, for the Locational Deliverability Areas (LDA) in which the demand resources are located. PJM asserts that projecting a generically applicable cost to develop new demand resources is not feasible.[209]

103. For existing resources (other than existing demand resources), PJM proposes that a resource subject to the MOPR be allowed to offer at a level no lower than its avoidable cost rate, which reflects its going-forward costs, net of estimated energy and ancillary services markets revenues (Net ACR).[210] PJM states that its default Net ACR for each resource type would be subject to revision under its quadrennial review of its VRR Curve and CONE values.[211]

104. PJM explains, however, that the default Net ACR for most existing generation resource types are low. PJM proposes to set the default Net ACR values for existing hydro, pumped hydro, solar photovoltaic, and onshore wind at $0, given its view that even the most conservative estimate of energy and ancillary services market revenues for these resources is higher than the estimated ACR. PJM proposes that, because this would result in negative default offer price floors, the prices be set at $0.[212] PJM adds that, if a seller believes the default offer price floor is too high, it can request a resource-specific

combustion turbine levelized annual costs are based on 2021-22 BRA planning parameters, as escalated to 2022-23. *Id.*

[207] *Id*. at 39-42.

[208] *Id*. at 40.

[209] *Id*. at 42-43.

[210] A resource's avoidable costs are its incremental costs of being a capacity resource: its fixed annual operating expenses that would not be incurred if it were not a capacity resource over that period.

[211] PJM Initial Testimony at 45. PJM made its VRR Curve quadrennial filing on October 12, 2018, in Docket No. ER19-105-000.

[212] *Id*. at 46.

determination. Finally, PJM proposes to set the default offer price floor for existing demand resources at $0. PJM notes that this value is appropriate because it was not able to identify any meaningful avoidable costs that would be incurred by an existing demand resource that would justify a higher value.[213]

2. Intervenor Positions

a. Planned Resources

105. Some intervenors argue the default offer price floors for both new and existing resources should be set at Net ACR.[214] Others argue the floors should be set based on Net CONE * B. The Market Monitor argues that the default offer price floor, which it argues defines the competitive offer, should be consistent with the definition in Capacity Performance, Net CONE * B.[215] The Market Monitor notes, however, that this definition is not accurate if there are no performance assessment intervals, or when the non-performance charge rate is not based on an accurate estimate of the expected number of performance assessment intervals. In those cases, the Market Monitor argues, a competitive offer should be defined by the Net ACR.[216] Conversely, Vistra opposes the Market Monitor's proposal as administratively burdensome and potentially providing the Market Monitor significant control over all offers in the capacity market.[217]

106. Some intervenors argue that setting the default offer price floor for new resources at Net CONE disadvantages them relative to existing resources.[218] ODEC contends that basing the default offer price floors for planned resources on Net CONE is contrary to

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[213] *Id*. at 47.

[214] Clean Energy Industries Reply Testimony at 24; DC People's Counsel at 9; ELCON Reply Testimony at 6; Vistra Initial Testimony at 16. Vistra's witness suggests, as an alternative, that the default offer price floors mirror the default capacity market seller offer cap at Net CONE * B. Vistra Initial Testimony, Russo Aff. at 15.

[215] Market Monitor Initial Testimony at 15; *see also* Exelon Initial Testimony at 30.

[216] Market Monitor Initial Testimony at 15.

[217] Vistra Reply Testimony, Russo Reply Aff. at 39-40.

[218] ELCON Reply Testimony at 6; Joint Consumer Advocates Reply Testimony at 8-9.

rational recovery of investment and will discourage self-supply.[219] The Market Monitor asserts that a competitive offer for a new resource in the capacity market is not Net CONE because such an offer implies a significant chance of not clearing, does not maximize profits for a developer, and constitutes a noncompetitive barrier to entry that would create a noncompetitive bias towards existing resources.[220] The Market Monitor takes issue with suggestions that Net CONE must be used in order to ensure that resources with out-of-market revenues do not clear in their first year in the capacity market, arguing it is not appropriate to define a competitive offer so as to exclude some offers.[221] OPSI argues PJM's use of Net CONE as a measure for a competitive market price in PJM is not a valid yardstick to measure market adjustments under application of a MOPR without exemptions, because Net CONE has been consistently too high. OPSI encourages the Commission to consider a recent report finding that Net CONE values for the 2022/2023 delivery year are between 22 and 41 percent lower than the current Net CONE values.[222]

107. AES opposes PJM's proposed default offer price floors arguing that those for new entrants far exceed the typical clearing prices of PJM capacity auctions.[223] Illinois Commission argues that PJM's proposed default offer price floors should be capped at the vertical intercept point on the VRR curve to ensure the default values are not so high as to make it impossible for mitigated resources to clear, regardless of the clearing price.[224]

108. PSEG argues, for new units, the default offer price floors should be based on the gross CONE applicable to the class of generational technology to which those units belong.[225]

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[219] ODEC Initial Testimony at 12.

[220] Market Monitor Reply Testimony at 4.

[221] *Id*. at 5.

[222] OPSI Initial Testimony at 10-12 (citing the Brattle Group and Sargent & Lundry, *PJM Cost of New Entry*, (Apr. 19, 2018), https://www.pjm.com/~/media/committeesgroups/committees/mic/20180425-special/20180425-pjm-2018-cost-of-new-entry-study.ashx).

[223] AES Initial Testimony at 12-13; AES Reply Testimony at 4-6.

[224] Illinois Commission Reply Testimony at 23.

[225] PSEG Initial Testimony at 12.

109. Some intervenors argue that the Commission should establish a test that permits a subsidized planned resource subject to the MOPR to make offers into future PJM capacity markets as an existing resource after five years of commercial operation, to prevent the MOPR from becoming a permanent barrier to entry.[226] Further, AES states that projects planned before new capacity market rules are imposed and that have contracts in place should be treated as existing resources; that is, be "grandfathered" as a transition device, particularly under an expanded MOPR.[227]

110. Some intervenors argue that PJM's proposed Net CONE values are thinly supported and contain errors.[228] For example, these intervenors contend that the *NREL Annual Technology Baseline* provides multiple sets of cost estimates for location-specific projects, and that PJM does not explain which numbers it actually uses, and that PJM offers identical values for energy and ancillary services revenue for onshore wind and offshore wind, which is not plausible given the different energy production profiles and locations of these technology types.[229]

111. AEE argues that, for planned renewable resources, the default offer price floors should reflect the declining costs and unique cost structures of advanced energy technologies to prevent over-mitigation.[230] Clean Energy Industries state that any default offer price floor applied to renewable resources receiving RECs should account only for the price-suppressive effect of the REC and should not be any higher.[231]

112. Clean Energy Industries state that PJM's use of the resource's lowest estimated energy revenues is unreasonable, because the default value should not be based on the extreme end of the zone of reasonableness.[232] Clean Energy Industries also note that this methodology is an unjustified departure from that used to calculate Net CONE as an

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[226] AES Initial Testimony at 22; PSEG Initial Testimony at 13.

[227] AES Initial Testimony at 22-23.

[228] Clean Energy Advocates Reply Testimony at 14-15; USC Reply Testimony at 3.

[229] Clean Energy Advocates Reply Testimony at 14-15; USC Reply Testimony at 9; Clean Energy Industries Reply Testimony at 22.

[230] AEE Initial Testimony at 27.

[231] Clean Energy Industries Initial Testimony at 18.

[232] Clean Energy Industries Reply Testimony at 18.

auction parameter, which uses annual average revenues.[233] Clean Energy Industries argue that PJM should either use the RTO-wide average energy revenues or develop default levels specific to each zone. Clean Energy Industries further object to PJM's values, arguing that PJM does not appear to have included ancillary service revenues in the default offer price floor calculations for renewable resources.[234] Third, Clean Energy Industries argue that PJM's proposed standard inputs, including the carrying charge and useful life for combined cycle and combustion turbines, are excessive for renewable resources, and that PJM should instead use values more appropriate to solar and wind resources.[235]

113. Some intervenors support setting the default offer price floor for demand response at zero.[236] Joint Consumer Advocates argue that PJM's proposal to average the last three years' demand response offers would be anti-competitive, unjust, unreasonable, and unduly discriminatory against new demand response resources. Joint Consumer Advocates explain that the default offer price floor would be excessively high because it would count new demand response bids, which are subject to the price floor, toward determining the price floor, creating an inflationary feedback loop.[237]

b. Existing Resources

114. Some intervenors agree with PJM that default offer price floors for existing resources should be based on going-forward avoidable costs, which will ensure the MOPR appropriately mitigates only uneconomic units with significant going-forward costs.[238] AES states that, should the Commission elect to use default offer price floors based on ACR, then it should also require a clear and transparent process to define and

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[233] *Id*. at 19.

[234] *Id*. at 20.

[235] *Id*. at 20-21. Specifically, Clean Energy Industries argue that solar resources may have access to more desirable financial structures than gas resources, and typically have a useful life of around 40 years (30 for wind). *Id*.

[236] AEE Initial Testimony at 28.

[237] Joint Consumer Advocates Reply Testimony at 11.

[238] AEE Initial Testimony at 28-29; Brookfield Reply Testimony at 4; *see also* Buyers Group Initial Testimony at 10-11; Brookfield Initial Testimony at 2, 7; SMECO Initial Testimony at 6; PSEG Initial Testimony at 12; Clean Energy Industries Reply Testimony at 24; Vistra Initial Testimony at 16; West Virginia Commission Reply Testimony at 2.

approve the ACR used to determine the default offer price floors, including an appeal mechanism and periodic review of the ACR.[239]

115. Other intervenors argue that the default offer price floors for existing resources should instead be based on Net CONE * B, for the same reasons described above for planned resources.[240] Vistra opposes the Market Monitor's proposal as administratively burdensome and potentially providing the Market Monitor significant control over all offers in the capacity market.[241]

116. Some intervenors also object to PJM's methodology for calculating default Net ACR values. The Market Monitor argues that the ACR values developed by PJM are based "on outdated information escalated using a generic inflation factor, without accounting for technology specific trends."[242] The Market Monitor notes that PJM's values are based on 2011 data escalated using a generic inflation factor to 2022. The Market Monitor contends this is unreasonable because technology costs are generally decreasing and not increasing. Further, the Market Monitor states that the Commission could require an annual process to update gross ACR values.[243] Joint Consumer Advocates agree that PJM's ACR values are based on outdated information and argue that the inflation factor applied by PJM is excessive.[244]

117. Brookfield supports PJM's proposal to set the default offer price floors for existing hydro, pumped hydro, solar PV and onshore wind resources at $0/ICAP MW-day.[245]

[239] AES Initial Testimony at 21.

[240] Exelon Initial Testimony at 30; Market Monitor Initial Testimony at 15-16.

[241] Vistra Reply Testimony, Russo Reply Aff. at 39-40.

[242] Market Monitor Reply Testimony at 6.

[243] *Id*.

[244] Joint Consumer Advocates Reply Testimony at 9.

[245] Brookfield Reply Testimony at 4.

118. Some intervenors agree that Net ACR for existing demand response resources is $0.[246] Microgrid states that microgrids often present to PJM as asset-backed economic demand resources and should also be subject to a MOPR offer price floor of $0.[247]

119. Direct Energy states that PJM has proposed to use default values for transmission connected (i.e., "front-of-the-meter") diesel generation for all behind-the-meter generation. However, Direct Energy argues that behind-the-meter generation is not economically similarly situated to front-of-meter generation, and thus it is not proper to use front-of-the meter ACR values for behind-the-meter generation.[248] Direct Energy states that if PJM's proposal is accepted, the Commission should ensure that the ACR used for behind-the-meter demand response reflects the true avoidable costs of such resources.[249]

c. Both Planned and Existing

120. Several intervenors argue that new and existing offer floors should be set based on the same methodology. Some intervenors argue the default offer price floors for both new and existing resources should be set at Net ACR.[250] Others argue the default offer price floors should be set based on Net CONE * B. The Market Monitor contends that the default offer price floors should not be set differently for new and existing resources, because a competitive offer in the capacity market is Net ACR regardless of whether the resource is new or existing. The Market Monitor further argues that PJM's proposal to define a competitive offer for resources subject to the MOPR as the Net ACR, while leaving the definition under Capacity Performance Net CONE * B, is not reasonable.[251] The Market Monitor contends that PJM should not use two different definitions of a

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[246] DC Commission Initial Testimony at 5-6; Joint Consumer Advocates Reply Testimony at 11; AEE Initial Testimony at 21-22; Pennsylvania Commission Reply Testimony at 15-16.

[247] Microgrid Reply Testimony at 12.

[248] Direct Energy Initial Testimony at 12.

[249] *Id*.

[250] *See, e.g.*, Clean Energy Industries Reply Testimony at 24; DC People's Counsel at 9; ELCON Reply Testimony at 6; Vistra Initial Testimony at 16. Vistra's witness suggests, as an alternative, that the default offer price floor mirror the capacity market seller offer cap at Net CONE * B. Vistra Initial Testimony, Russo Aff. at 15.

[251] Market Monitor Initial Testimony at 15.

competitive offer in the same market.[252] Conversely, PSEG argues that the MOPR needs to distinguish between new and existing units.[253]

121. The Illinois Commission argues that because PJM's formula for calculating default offer price floors does not include permissible out-of-PJM-market revenues, such as proceeds from arm's-length bilateral contracts, it will result in default offer price floors that are too high that could improperly prevent a targeted resource from clearing in PJM's auctions.[254] Illinois Commission recommends that the Commission also subtract payments, assurances, or other such benefits provided by taxpayers, rather than by electricity consumers, from the resource's ACR or Net CONE, as such payments are not subsidies.[255] The Illinois Attorney General argues that the Net ACR calculation for subsidized resources should include all revenue, including that received from subsidies, to determine the accurate avoidable costs.[256]

122. The Illinois Attorney General argues that the energy and ancillary services revenue offsets should be location-specific, rather than, as PJM proposes, the lowest zonal value estimated for each resource class over the past three years.[257]

123. The Pennsylvania Commission requests that any estimated increases in energy and ancillary services revenues that result from price formation reforms should be reflected in the default offer price floors, including any historical energy and ancillary services offsets under the quadrennial review process.[258]

124. The Illinois Attorney General asserts that the Commission should direct PJM to develop default offer price floors based on objective, public information, as it does for

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[252] *Id*. at 16; *see also* Clean Energy Industries Reply Testimony at 24.

[253] PSEG Initial Testimony at 13.

[254] Illinois Commission Reply Testimony at 20-23.

[255] *Id*. at 22.

[256] Illinois Attorney General Initial Testimony at 12.

[257] *Id*. at 9; *see also* PJM Consumer Representatives Reply Testimony at 12 (arguing that the Illinois Attorney General proposal appears to be consistent with the objectives of the MOPR).

[258] Pennsylvania Commission Reply Testimony at 16-17; *see also* Illinois Commission Initial Testimony at 11.

natural gas plants under the existing Tariff.[259] UCS argues that the new default offer price floors should be subject to the same transparency as the current default offer price floors, including a description of key drivers such as technology choice, plant configurations, interconnection costs, engineering, financing, taxes, insurance, and locational information. UCS argues that PJM has provided so little information that it is not possible to tell which values PJM used in even the publicly cited source material.[260] Clean Energy Industries state that accurate resource type-specific wind and solar default offer price floors need to account for bonus depreciation and federal incentives like the PTC and ITC, as well as a longer, resource-specific useful life than PJM's proposed 20 year asset life.[261]

d. <u>Resource Type-Specific Values</u>

125. Some intervenors support resource type-specific values.[262] Conversely, IMEA generally supports PJM's proposed default offer price floors, but disagrees that default offer price floors should be different as between technology types.[263] IMEA asserts that the establishment of a different default offer price floor for the technology types other than natural gas-fired combustion turbines would require sell offers in excess of the top of the VRR curve (which is determined based on a single CONE value), thereby necessarily precluding new resources of other technology types from ever clearing the auction. IMEA concludes that the default offer price floor for all technology types should be set based on the lowest cost technology type and therefore represent the most competitive resource type for new entry. IMEA argues that market participants who choose to build more expensive technologies will not recover all of their costs from the capacity market, but will also not adversely affect the clearing price, because the default offer price floor will already be at the top of the VRR curve.[264]

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[259] Illinois Attorney General Initial Testimony at 11.

[260] UCS Reply Testimony at 8-9.

[261] Clean Energy Industries Initial Testimony at 19-20. Clean Energy Industries proposes a 35 year asset life. *Id.*

[262] DC People's Counsel Initial Testimony at 9; LS Power Initial Testimony at 7; NRG Initial Testimony at 42; PSEG Initial Testimony at 12; Brookfield Reply Testimony at 4.

[263] IMEA Reply Testimony at 17.

[264] *Id*. at 17-18.

e. Alternate Methodologies

126. AES proposes a Proportional MOPR which accounts for the value of the subsidy relative to a resource's revenue, noting that for a partial subsidy, there could still be headroom between the Proportional MOPR offer price floor and the clearing price in a capacity auction.[265]

127. PJM Consumer Representatives assert that the default offer price floor should approximate an offer that would have been submitted absent the subsidy, and thus should equal the average offers from "like resources" that cleared the BRA over the past three years, excluding offers subject to the MOPR (e.g., the MOPR for an onshore wind resource receiving a subsidy would be the average cleared offer for onshore wind projects over the past three BRAs).[266] However, where the number of "like resources" that cleared in the BRA over the past three years is less than ten units total, PJM Consumer Representatives state the alternate proxy would be the lower of: (a) 50 percent of Net CONE * B, or (b) the average of the subsidized resource's actual cleared offers in the three BRAs that were conducted before it began receiving a subsidy.[267] Vistra opposes this proposal as administratively burdensome, and further notes that offers submitted prior to a resource receiving a subsidy may still be uncompetitive if the resource owner already knew it would be receiving the subsidy at the time of submission.[268]

128. Clean Energy Industries propose a Depreciated MOPR Approach, which would calculate a default offer price floor by subtracting the first-year annual energy and ancillary services revenues from the first-year annual operating costs and remaining levelized plant costs.[269] Clean Energy Industries state that the only difference between the Depreciated MOPR Method and PJM's proposal is when the default offer price floor is calculated; under PJM's proposal, default offer price floors are calculated at the first

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[265] AES Reply Testimony at 5.

[266] PJM Consumer Representatives Initial Testimony at 12. PJM Consumer Representatives explain that categories defined broadly based on generation technologies (e.g., coal, natural gas-fired combustion turbines, natural gas-fired combined cycle, oil-fired, onshore wind, offshore wind, solar) would suffice. AFPA states that, while it does not necessarily endorse all of the details of the PJM Consumer Representatives' proposals, it believes the proposals to be a practical way to address the Commission's concerns. AFPA Initial Testimony at 2.

[267] PJM Consumer Representatives Initial Testimony at 12-13.

[268] Vistra Reply Testimony, Russo Reply Aff. at 42.

[269] Clean Energy Industries Reply Testimony at 25.

year of operation, while under the Depreciated MOPR Method, default offer price floors are calculated at the year in which the resource bids into the capacity market.[270] Clean Energy Industries argue that this proposal is superior to PJM's, because it would reflect a more accurate default offer price floor for resources that fail to clear the capacity market initially.[271]

129. Alternatively, Clean Energy Industries contend that PJM could use the Levelized Cost of Energy to calculate the default offer price floor, because Levelized Cost of Energy is a commonly accepted method for calculating a generator's total revenue requirement based on its energy output over its useful life.[272] Clean Energy Industries argue this would more appropriately account for the variable energy output during an asset's operating life than the Net CONE approach.[273]

f. Answers

130. PJM responds to intervenor arguments that any of the default offer price floors are too high, arguing that the values are only defaults and no seller is required to use them. On the contrary, PJM points out that any seller can use the resource-specific review process to demonstrate lower costs.[274] Clean Energy Industries, in its Answer, respond that the unit-specific review is an insufficient protection against an unjust and unreasonable market structure, especially given that some financial modelling assumptions appear to be enumerated in PJM's proposed Tariff language and thus cannot be changed.[275] Clean Energy Industries further argue that the need to pursue unit-specific review is an added burden that may deter new entry.[276]

131. PJM agrees, however, with Clean Energy Industries' argument that the default offer price floors should include an offset for ancillary services market revenues. PJM notes that such revenues are small and unlikely to have a significant impact on the default

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[270] *Id*. at 25-26.

[271] *Id*. Clean Energy Industries also supports the Market Monitor's ACR approach as an alternative. *Id.* at 23.

[272] *Id*. at 28.

[273] *Id*. at 29.

[274] PJM Answer at 2-3.

[275] Clean Energy Industries Answer at 5.

[276] *Id*. at 6.

offer price floors, but states that PJM is willing to update its proposed floors in a compliance filing.[277]

132. PJM asserts, on reply, that using the lowest applicable zonal energy revenue estimate to offset estimated costs is reasonable, because there is significant variation in energy revenues for each resource type between zones and over time. PJM argues the lowest value is appropriate because the purpose of the MOPR is to establish a conservative default option. PJM notes again that sellers can always use the resource-specific option and use energy market revenues for the zone in which the resource is located, if the seller objects to the default energy revenue estimate.[278]

133. PJM disagrees with Clean Energy Industries' arguments that it is inappropriate to use a standardized set of financial inputs developed for natural gas-fired resources for renewable resources. PJM argues that it is just and reasonable to use the same Commission-approved parameters for all resources participating in its capacity market to ensure all resources competing against each other are being analyzed in a comparable fashion.[279] PJM further argues that 20 years is a reasonable asset life assumption, as "recent experience" with the rapid technological changes in the relative competitiveness of various resource types make any longer estimate overly optimistic for use in a default offer price floor.[280] Alternatively, Clean Energy Industries argue that PJM does not quantify this recent experience.[281]

134. PJM also disagrees with Clean Energy Industries that the competitive costs for renewable resources should be based on a subsidy in the form of tax credits, arguing that this would be contrary to the purpose of the MOPR.[282]

135. PJM responds to arguments that the energy market revenue estimates for onshore and offshore wind are in error, explaining that it calculated the two values using different assumptions, but that the values happened to coincide.[283] UCS, in its Answer, argues that PJM's explanation does not resolve their concerns and that their arithmetic still contains

[277] PJM Answer at 4 (citing Clean Energy Industries Reply Testimony at 20).

[278] *Id*. at 5 (citing Clean Energy Industries Reply Testimony at 18).

[279] *Id*. at 6-7 (citing Clean Energy Industries Reply Testimony at 20-22).

[280] *Id*. at 7.

[281] Clean Energy Industries Answer at 5 n 18.

[282] PJM Answer at 7.

[283] *Id*. at 7-8.

an error. Specifically, UCS argues that, in calculating the estimated annual energy revenue for onshore wind, PJM erroneously applied the capacity factor twice.[284] In addition, UCS argues that PJM states that it used data from the National Renewable Energy Laboratory for the capacity factors for onshore and offshore wind, but UCS contends that the *NREL Annual Technology Baseline* contains numerous potential capacity factors for offshore wind, all of which are higher than PJM's proposed value of 26 percent.[285]

136. With regard to new resources, PJM argues that the Commission has consistently approached basing competitive offers for such resources on Net CONE, and that any suggested departure from that method is out of the scope of this proceeding and unreasonable.[286] PJM argues this method continues to be reasonable, because all of a resource's costs are deemed to be avoidable until the resource clears the market, and that the record in this proceeding does not justify abandoning the long-standing approach.[287] Clean Energy Industries disagree with PJM in its Answer, arguing that this methodology must be reevaluated in this proceeding, especially given that the Commission has proposed using the MOPR in a significantly different manner, and for a different purpose, than it historically has been used.[288] Clean Energy Industries argue that the Commission should explain in its ultimate order why PJM's current method for calculating the default offer price floor should be used moving forward under the new paradigm.[289]

137. PJM argues that, under the Market Monitor's proposal, subsidized new entry could circumvent the MOPR rules by accepting subsidies supporting a resource's construction costs before offering the resource into the market at a level below the resource's actual cost of entry.[290] PJM further disagrees with the proposed Levelized Cost of Entry approach, explaining that while Levelized Cost of Entry is useful for comparing energy production by different technologies, for the same basic capital and operating costs it cannot produce a significantly lower Net CONE as the basis for a resource's competitive

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[284] UCS Answer at 3 n.3.

[285] *Id*. at 3.

[286] PJM Answer at 8-9.

[287] *Id*. at 10-11.

[288] Clean Energy Industries Answer at 3-4.

[289] *Id*. at 4.

[290] PJM Answer at 11.

cost of committing as capacity.[291] Clean Energy Industries argue that PJM's Answer suggests either that PJM is not familiar with the Levelized Cost of Entry approach or is using different data than Clean Energy Industries.[292] Clean Energy Industries contend that the Commission must give full consideration to the alternative financial inputs it put forth and not dismiss them based on PJM's conclusory responses.[293]

3. Commission Determination

a. Planned Resources

138. We adopt PJM's proposal to set the default offer price floor for certain resources that have not previously cleared the capacity market at Net CONE for each resource type.[294] This is consistent with the existing MOPR, which sets the default offer price floor based on a percentage of a default Net CONE for the resource type. Given that we will retain the Unit-Specific Exemption in the replacement rate, we disagree with intervenors who argue that setting the default offer price floor at Net CONE for each resource type constitutes a barrier to entry because it is too high. On the contrary, we find that it is just and reasonable to raise that percentage from 90 to 100 percent of Net CONE. A purpose of the MOPR is to ensure resources are offering competitively. For resources that have not previously cleared a capacity auction, the MOPR is intended to ensure that uneconomic resources, that are unlikely to recover the full cost of new entry over the life of the resource, are not able to enter the market at a lower cost because they receive a State Subsidy. If a resource does not qualify for the Competitive Exemption, we find that requiring new resources to offer at 100 percent of the default Net CONE, unless they are able to justify a lower Net CONE value through the Unit-Specific Exemption, is a just and reasonable method of accomplishing this goal. We reject arguments that Net CONE is no longer appropriate now that the focus of MOPR application has shifted.[295] An underlying purpose of the MOPR has been to prevent suppliers from offering uneconomically low-priced capacity into the market—here we expand the MOPR to certain existing and new resources to address price suppression caused by State Subsidies. We further reject as unsupported arguments that the default offer price floors should instead be based on gross CONE. Net CONE more accurately

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[291] *Id*. at 12-13.

[292] Clean Energy Industries Answer at 4.

[293] *Id*. at 5 n.19.

[294] Repowered resources are considered new for the purposes of the MOPR.

[295] June 2018 Order, 163 FERC ¶ 61,236 at P 153.

reflects the costs a new resource faces in entering the capacity market because it subtracts expected revenues from costs.

139. We agree that using Net CONE for the default offer price floor for new resources may significantly affect the ability of new resources receiving State Subsidies to clear the market, as compared to using Net ACR, but we find that this is just and reasonable. New resources should be less likely to clear than many existing resources because they face additional avoidable costs that existing resources do not face, including construction and permitting costs.[296] Sellers that believe their actual costs are less than the default Net CONE values may apply for the Unit-Specific Exemption. Therefore we find that using Net CONE will not create an unjust and unreasonable barrier to entry, but will rather allow the MOPR to fulfill its purpose and protect the capacity market from uneconomic new entry by State-Subsidized Resources.

140. We also find it would not be appropriate to use Net ACR as the default offer price floor for new resources. Net ACR does not account for the cost of constructing a new resource. Using Net ACR as the MOPR value for new resources would not serve the purpose of the MOPR, because it does not reflect new resources' actual costs of entering the market and therefore would not prevent uneconomic State-Subsidized Resources from entering the market.

141. Protestors argue that subsidized resources should not be forced to remain as new resources, mitigated at Net CONE, indefinitely. We reject that argument. In order to be treated as existing resources, new State-Subsidized Resources must first clear the capacity auction subject to the default offer price floor appropriate to a new resource. It would not be reasonable to treat resources that fail to clear the capacity market subject to the new resource default offer price floor as existing resources. An exemption that allows new, State-Subsidized Resources to bypass the MOPR, solely because the MOPR prevents them from clearing, would completely defeat the purpose of the MOPR. We similarly reject arguments that projects planned before new rules are imposed should be exempt. Market participants are frequently confronted with changing rules and regulatory structures. Here, resources have been on notice since 2016, when the Calpine Complainants filed their complaint, that capacity market rules may be revised.

142. We acknowledge concerns that PJM estimates the default offer price floor for some resources in excess of the top of the demand curve. However, a high Net CONE value simply underscores how uneconomic these resources generally are in the PJM capacity market. We also note that resources for which the default offer price floor is above the demand curve starting point may request a Unit-Specific Exemption, should

[296] *See, e.g.*, PJM Initial Testimony at 44 (explaining that construction and development costs should not be included in the default offer price floor for existing resources).

they determine that their costs are lower than the default. We therefore find that it is appropriate to use a resource-type-specific default offer price floor that reasonably reflects a competitive offer for such a resource, regardless of whether it is above the demand curve starting price.

143. We also adopt PJM's proposal to update the values annually and as part of PJM's quadrennial review of its demand curve and CONE values. We reiterate that we direct PJM to use resource-type specific Net CONE values for resources that have not previously cleared a capacity auction. However, given the importance of an accurate default offer price floor and the number of questions raised in the record as to how the values were calculated, we direct PJM to provide additional explanation on how it calculated each of the proposed values on compliance, including workbooks and formulas, as appropriate.

144. We direct PJM to establish appropriate default offer price floor values for demand-side resources, including demand response and energy efficiency. As noted above, we disagree that it is infeasible for PJM to determine Net CONE or Net ACR values for demand-side resources that rely on various types of behind-the-meter generation as a substitute for purchasing wholesale power. The fundamental elements of the analysis for behind-the-meter generation is the same as for other resources. We direct PJM to provide Net CONE values for such generation on compliance, noting that it may be appropriate to use resource-type specific values as for other types of generation resources.[297]

145. For demand-side resources that commit to cease using wholesale power, rather than shift to behind-the-meter generation, PJM will average the last three years' demand response offers to determine the default offer price floor value for resources that have not previously cleared a capacity auction.[298] We find that PJM's proposed default offer price floor approach for these demand-side resources that have not previously cleared a capacity auction is just and reasonable. We note, however, that this average should include non-generation-backed demand resources. We disagree with intervenors arguing that the average will trend upward over time because PJM proposes to average all demand response offers, new and existing. While it is true that new demand response resources that receive a State Subsidy will be subject to a default offer price floor that is, in part, determined by the offers of previous new resources subjected to the same floor, the average will also include existing resources and new resources that receive the Unit-

[297] We understand that applying the MOPR to demand response resources in this manner may necessitate changes to how demand response resources participate in the capacity market, such as requiring demand response aggregators to contract with resources sooner. PJM should include in its compliance filing any additional changes to its Tariff that may be necessary in order to implement this MOPR directive.

[298] PJM Initial Testimony at 42-43.

Specific Exemption to offer below the default offer price floor. We therefore find that PJM's proposal will reasonably reflect the average costs of demand response resources and will serve as an appropriate default offer price floor.

146. We direct PJM to propose default offer floor prices for all other types of resources that participate in the capacity market, including capacity storage resources, as well as resources whose primary function is not energy production, including facilities fueled entirely by, for example, landfill gas, wood waste, municipal solid waste, black liquor, coal mine gas, or distillate fuel oil, on compliance. PJM should file additional default offer price floors for new technologies as they emerge.

147. Finally, because energy efficiency operates differently from other resources that are intended to reflect reductions in wholesale demand, it is difficult to describe energy efficiency in terms of Net CONE or Net ACR. Instead, on compliance, we direct PJM to establish objective measurement and verification requirements for new energy efficiency offers and to limit such offers to the verifiable level of savings.

b. Existing Resources

148. We adopt PJM's proposal to set the default offer price floor for existing resources at the resource-type specific Net ACR. Net ACR for an existing resource estimates how much revenue the resource requires (in excess of its energy and ancillary service revenue) to provide capacity in the given year. Using a resource-type Net ACR as the default offer price floor for existing resources is therefore just and reasonable because it recognizes that generation resources are a long-term investment that may fluctuate in value over time, but still allows those resources to receive capacity revenues in years in which they are less profitable. We further find that the default offer price floor for existing generation-backed demand response resources should be set at Net ACR for the appropriate generation type.

149. We agree with the Market Monitor that basing the default offer price floor values for existing resources on 2011 data with a generic inflation factor is insufficient. We direct PJM to propose new values using more updated data, and to develop a process to ensure all the data used in the calculation is updated annually. As with the Net CONE values, a number of questions have been raised in the record as to how the Net ACR values were calculated. We order PJM to provide additional explanation on compliance, including workbooks and formulas, as appropriate. Additionally, we find that any uprates (i.e., incremental increases in the capability of existing resources), of any size are considered new for purposes of applying the MOPR and should be mitigated to Net CONE and not Net ACR. These uprates may come with additional avoidable costs, such as construction costs, that existing resources otherwise do not face. We also direct PJM to provide additional justification for setting the default offer price floors for existing renewable resources at zero.

150. Finally, we direct PJM to propose default offer price floors for all other types of resources, including energy efficiency,[299] non-generation-backed demand response resources, and capacity storage, as well as resources whose primary function is not energy production, including facilities fueled entirely by, for example, landfill gas, wood waste, municipal solid waste, black liquor, coal mine gas, or distillate fuel oil, on compliance.

c. **Both Planned and Existing**

151. We find that it is just and reasonable to use different methodologies to set the default offer price floors for new and existing resources. Existing resources face different costs than new resources, because the decision to enter the market is different than the decision to remain in the market. For planned resources, the default offer price floor should include, for example, construction costs and certain fixed costs that an existing resource does not usually face.

152. Some parties argue that the Commission should set the default offer price floor for resources subject to the MOPR at Net CONE * B. The Commission previously found Net CONE * B provided a reasonable estimate of a competitive offer for a resource with a low ACR.[300] However, we did not find the Net CONE * B price accurately reflects any particular resource's cost. In addition, we note that the Commission did not find that Net CONE * B was the only just and reasonable competitive offer. We therefore find that it is just and reasonable for PJM's Tariff to use one definition of a competitive offer to set the default capacity market seller offer cap for supplier-side market power mitigation and a different one for the different purpose of setting the default offer price floor.

153. We disagree with arguments that State Subsidies should be considered as revenue for either resources that have never cleared a capacity auction or existing resources, as this would defeat the purpose of the rate modifications directed in this order, which is to prevent State-Subsidized Resources from submitting uncompetitive offers as a result of State Subsidies. We agree with PJM that the proposed 20-year asset life is appropriate.[301] We also agree with PJM that default MOPR values should maintain the same basic financial assumptions, such as the 20-year asset life, across resource types. The Commission has previously determined that standardized inputs are a simplifying tool

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[299] *See supra* P 148.

[300] *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208 at P 340.

[301] Rapid changes in market conditions and generation technology could make resources uneconomic in less than Clean Energy Industries' proposed 35 years.

appropriate for determining default offer price floors,[302] and we reaffirm that it is reasonable to maintain these basic financial assumptions for default offer price floors in the capacity market to ensure resource offers are evaluated on a comparable basis. Therefore, we find 20 years to be an appropriately conservative estimate.

154. We agree with intervenors and PJM that the default offer price floors should include an offset for ancillary services market revenues. In addition, we agree with intervenors that energy revenue offsets should be zone-specific, rather than based on the lowest zonal value estimated for each resource type over the past three years. Using the lowest possible value biases the default offer price floor upwards and does not reflect the revenues resources are actually likely to earn. PJM's Answer, stating that there is significant variation in energy revenues for each resource type between zones and over time, merely reinforces the importance of using zone-specific energy and ancillary services revenue values. On compliance, we order PJM to develop default average energy and ancillary services revenue offset values for each resource type by zone.

155. We agree with PJM that the default offer price floors should be updated regularly and adopt PJM's proposed Tariff language to update them annually and conduct a larger review on a quadrennial basis. We also agree with Illinois AG, however, that the calculation of the default offer price floors should be more transparent than what has been provided in the testimony. As noted above, we are requiring PJM to provide additional information supporting its values on compliance. We decline to add future transparency requirements to the Tariff at this time, as we anticipate the quadrennial filings, which historically have updated CONE and default offer price floor values, will continue to provide that information despite the broader range of default offer price floors which must be provided, and will contain significant details, consistent with the level of detail already provided in the quadrennial updates. Additional requirements are therefore unnecessary.

156. With regard to Pennsylvania Commission's requests that PJM adjust the default offer price floors to account for future changes in price formation and the results of the quadrennial review process, we find those requests to be premature. Because such changes have not yet been made, we cannot evaluate their reasonableness and decline to speculate here.

d. Miscellaneous

157. In response to arguments that the default offer price floor should be the same for all resource types, we agree with PJM that it is appropriate to calculate different default values for different resource types. The going-forward cost of a nuclear resource, for example, would likely be substantially different from that of an onshore wind resource.

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[302] 2013 MOPR Order, 143 FERC ¶ 61,090 at P 144.

Resources of different types compete against each other in a single capacity market, and it would undermine the effectiveness of the expanded MOPR to subject resources with varying going-forward costs to the same default offer price floor.

158. Finally, having established a just and reasonable method for establishing default offer price floors, we need not discuss the other alternative methodologies proposed.

D. Exemptions

1. Competitive Exemption

a. PJM's Proposal

159. In its paper hearing testimony, PJM does not re-propose the competitive entry exemption it proposed, and the Commission accepted, in 2013,[303] but rather submits that the expanded MOPR will apply to capacity resources receiving material subsidies where the relevant resource is "entitled" to a material subsidy and the seller "has not certified that it will forego receiving any Material Subsidy for such Capacity Resource during the applicable Delivery Year."[304] PJM states that sellers will need to affirmatively inform PJM of their choice to forego the subsidy no less than thirty days before the commencement of the relevant BRA,[305] and sellers have an ongoing obligation to provide notification of status changes.[306]

b. Intervenor Positions

160. Several intervenors support PJM's proposal that the expanded MOPR will not apply to resources who have certified that they will not receive a subsidy. AES agrees that resources that do not accept a subsidy or renounce an available subsidy should be exempt from the MOPR.[307] Vistra asserts that all resources participating in the capacity market without being subject to the MOPR should attest that they will not accept any subsidies prior to or during the applicable delivery year to avoid resources gaming the entitled to language by not taking a subsidy at the time of the auction, but later accepting

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[303] *See* 2013 MOPR Order, 143 FERC ¶ 61,090 at PP 24, 28, 53 (competitive entry exemption applies to resources receiving no out-of-market funding or resources receiving out-of-market funds as a result of a competitive auction process open to all resources).

[304] PJM Initial Testimony at 25-28; proposed Tariff, Att. D, § 5.14(h)(ii)(B).

[305] PJM Initial Testimony at 27; proposed Tariff, Att. D, § 5.14(h)(iii)(A).

[306] Proposed Tariff, Att. D, § 5.14(h)(iii)(B).

[307] AES Initial Testimony at 19.

out-of-market support during the delivery year.[308] NRG argues that sellers should have an affirmative obligation to provide updated information to PJM and the Market Monitor to report the existence of a subsidy after the self-certification deadline.[309] AES states that penalties should be designed to reduce any incentive to establish new subsidies that are timed to avoid being taken into account for the upcoming auction.[310]

c. Commission Determination

161. The focus of the expanded MOPR directed in this order is to mitigate the impact of State Subsidies on the capacity market, and, therefore, resources that do not receive State Subsidies should be able to participate in the capacity market without mitigation, subject to PJM's existing buyer-side market power rules. We therefore direct PJM to include a Competitive Exemption for both new and existing resources, other than new gas-fired resources, that certify to PJM that they will forego any State Subsidies. We find that it is reasonable and consistent with the purposes of the expanded MOPR directed herein to allow new and existing resources (other than new gas-fired resources) that certify to PJM that they will forego any State Subsidies, to avoid being subject to the applicable default offer price floor. Doing so will facilitate the capacity market's selection of the most economic resources available to meet resource adequacy objectives.

162. We share intervenors' concerns that PJM's proposed language leaves a loophole whereby a resource may not be eligible for a State Subsidy at the time of the capacity market qualification process, but may become eligible for such a subsidy, and accept it, before or during the relevant delivery year. We therefore direct PJM to include in its compliance filing a provision stating that if an existing resource[311] claims the Competitive Exemption in a capacity auction for a delivery year and subsequently elects to accept a State Subsidy for any part of that delivery year, then the resource may not receive capacity market revenues for any part of that delivery year.[312] We also direct PJM to include in its compliance filing a provision stating that if a new resource claims the Competitive Exemption in its first year, then subsequently elects to accept a State Subsidy, that resource may not participate in the capacity market from that point forward

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[308] Vistra Initial Testimony at 15.

[309] NRG Reply Testimony at 28.

[310] AES Initial Testimony at 26.

[311] *See supra* note 5.

[312] The resource would, however, be eligible for capacity market revenues for the relevant delivery year if it could demonstrate under the Unit-Specific Exemption that it would have cleared in the relevant capacity auction.

for a period of years equal to the applicable asset life that PJM used to set the default offer floor in the auction that the new asset first cleared.[313] We find that, absent this change, PJM's proposed language would allow gaming and incent the creation of subsidy programs timed to avoid the qualification window.

2. Renewable Portfolio Standards Exemption

a. PJM's Proposal

163. PJM proposes to exclude voluntary REC[314] programs, stating that a "renewable energy credit (including for onshore and offshore wind, as well as solar, collectively, RECs) will not be considered a Material Subsidy, if the Capacity Market Seller sells the REC to a purchaser that is not required by a state program to purchase the REC, and that purchaser does not receive any state financial inducement or credit for the purchase of the REC."[315] PJM asserts that voluntary bilateral arrangements for RECs are unrelated to statutory RPS program requirements because the demand for voluntary RECs comes primarily from private corporations pursuing environmental agendas. PJM thus believes that voluntary REC purchases are distinguishable from the bulk of REC purchases made to show compliance with state RPS program mandates.[316]

164. PJM does not propose to exempt mandatory REC programs (although, as PJM notes, a 20 MW unforced capacity materiality threshold, as proposed by PJM, would, in practice, exclude the majority of renewable resources).[317] Given the difficulty of tracing REC transactions after the initial purchase, PJM proposes to presume that any REC sales

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[313] Elsewhere in this order, we accept the 20-year asset life PJM proposed. If that value is modified in future proceedings, the period of years for which the resource may not participate in the capacity market must be modified accordingly.

[314] PJM maintains its Generation Attribute Tracking System as a trading platform designed to meet the needs of buyers and sellers involved in the REC market. The REC becomes a commodity the generation owner can now sell to an interested buyer. Buyers can vary from electric utilities to brokers or aggregators, to environmental firms or to non-industry companies looking to neutralize their carbon footprint. Load serving entities (LSE) may meet state RPS program mandates through RECs, but it is not the only way to meet RPS program requirements.

[315] PJM Initial Testimony at 21; proposed Tariff, Art. I, Material Subsidy definition.

[316] PJM Initial Testimony at 24-25.

[317] *Id.* at 18.

to an intermediary are to meet mandatory RPS programs, and therefore not exempt. PJM also states that if the subsidy to a generator takes some other form than a traditional bilateral REC transaction between private entities, the proposed Tariff language would not shield the financial inducements or credits from the MOPR. PJM adds that, because the going-forward costs of renewable resources are typically low, it does not expect the application of the MOPR to RECs to materially impact the ability of renewable resources to clear the auction.[318]

b. Intervenor Positions

165. Several intervenors support an exemption for resources receiving revenue through RPS programs generally or RECs specifically.[319] According to intervenors, RECs do not have a price suppressive impact on the market and should be excluded from MOPR.[320] Intervenors argue that RECs are not predictable enough to cause a resource to be built or to modify its offer.[321] For example, intervenors argue that RECs are not created and sold until very close to the time when a renewable energy project enters commercial operation, well after resources have submitted their capacity offers, and thus do not materially impact capacity offers.[322] DC People's Counsel also explains that the District of Columbia's REC auction occurs annually, which can make it difficult for resources to

[318] *Id*. at 23 n.39.

[319] ACORE Initial Testimony at 1-2; AEE Initial Testimony at 10-12; Brookfield Initial Testimony at 8-9; Brookfield Reply Testimony at 5-7; Buyers Group Initial Testimony at 7; Clean Energy Advocates Initial Testimony at 24; DC Attorney General Initial Testimony at 10; DC Commission Initial Testimony at 4; Maryland Commission Reply Testimony at 10-11.

[320] Brookfield Reply Testimony at 8 (citing a 2018 Market Monitor report finding that the clearing price was not impacted by the removal of wind and solar resources).

[321] Clean Energy Advocates Initial Testimony at 24-27; Brookfield Initial Testimony at 9; ACORE Initial Testimony at 3; AEE Initial Testimony at 10; Clean Energy Industries Initial Testimony at 15.

[322] AEE Initial Testimony at 13; ACORE Initial Testimony at 3; Clean Energy Industries Initial Testimony at 15, 17; Clean Energy Industries Reply Testimony at 14-15; DC People's Counsel Initial Testimony at 8.

bid into PJM's three year forward capacity auction using any assumptions of their REC price.[323]

166. Intervenors further argue that RPS programs do not impact bidding behavior because REC prices are a result of a competitive market (e.g., supply and demand), and therefore REC prices are volatile.[324] According to AEE, REC prices are increasingly low as the costs of renewable projects continue to decline.[325]

167. Intervenors argue that the financial support received by resources through RPS program requirements has not been shown to have a meaningful impact on capacity offers by these resources or allow otherwise uncompetitive resources to clear the capacity market.[326] DC Commission argues the percentage of renewable energy in PJM is about 4 percent, which is insignificant and should be exempt from the MOPR.[327] Intervenors argue that RPS programs tend to have minimal, if any, impact on capacity markets after they have been in effect for more than a few years, because the growth of renewable resources outpaces the RPS program requirements.[328]

168. Should the Commission decide to apply the MOPR to RECs, AEE urges the Commission to avoid over-mitigation by confining application of the MOPR to RECs substantial and reliable enough to actually influence a resource's offer, which AEE explains is likely only true in the rare instances where a state policy directly sets both the price and term of the REC, ensuring that a specific resource will receive certain revenues,

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[323] DC People's Counsel Initial Testimony at 8.

[324] Clean Energy Advocates Initial Testimony at 25-26. DC Attorney General Initial Testimony at 10; Clean Energy Industries Initial Testimony at 3, 13, 20-21; DC Commission Initial Testimony at 8; Brookfield Reply Testimony at 7; AEE Initial Testimony at 10-11; DC Attorney General Initial Testimony at 9-10.

[325] AEE Initial Testimony at 11.

[326] *Id*. at 10; Clean Energy Industries Initial Testimony at 13.

[327] DC Commission Initial Testimony at 7; *see also* Maryland Commission Reply Testimony at 10 (arguing renewable resources should be exempted from the MOPR because they have a relatively low level of penetration and they are unlikely to be mitigated under the MOPR regardless).

[328] Clean Energy Groups Reply Testimony at 4.

known in advance, for an extended time period. Because those instances are so rare, AEE argues, a MOPR that applies to all RECs would be administratively burdensome.[329]

169. Some intervenors argue that RECs are not subsidies of the type the Commission addressed in the June 2018 Order because they do not suppress capacity prices[330] or because they do not function by creating specific price supports for specific resource classes.[331] PJM Consumer Representatives argue that RECs and RPS programs do not involve requirements for dollar transfers from electricity consumers to certain generators, and are therefore not subsidies.[332]

170. Several intervenors argue that the Commission should not mitigate RECs purchased voluntarily as a result of consumer preferences.[333] Intervenors argue that voluntary REC purchases are not driven by state policies, are a result of private actions, and are outside the Commission's jurisdiction.[334] To avoid mitigating voluntary RECs, AEE requests the Commission allow renewable resources to certify that they will not retire any RECs for the purposes of mandatory state compliance, or, alternatively, that they will retire less than one percent of their total project revenue's worth of RECs for state RPS program compliance.[335]

171. Several intervenors point to potential problems with PJM's proposal to not exempt voluntary RECs sold through intermediaries, arguing that such purchases cannot reasonably be assumed to be used solely, or even mostly, for state compliance

[329] AEE Initial Testimony at 14.

[330] Brookfield Initial Testimony at 9.

[331] Clean Energy Advocates Initial Testimony at 24.

[332] PJM Consumer Representatives Reply Testimony at 6.

[333] ACORE Initial Testimony at 2; AEE Initial Testimony at 15; AES Initial Testimony at 19-20; Avangrid Initial Testimony at 10; Brookfield Initial Testimony at 9-10; Clean Energy Industries Initial Testimony at 6; Buyers Group Initial Testimony at 6, 8-9; Clean Energy Industries Reply Testimony at 11.

[334] ACORE Initial Testimony at 2-3; *see also* Clean Energy Industries Reply Testimony at 11.

[335] AEE Initial Testimony at 16-17.

purposes.[336] Microsoft explains that it always uses any RECs it procures and so never receives any financial benefit from the RECs, even when it uses intermediaries such as brokers to procure the RECs.[337] If this aspect of PJM's proposal is accepted, Microsoft asserts that the capacity offers associated with these RECs would be artificially inflated, without achieving the objective of mitigating price suppression from state subsidies.[338]

172. Conversely, a number of intervenors oppose MOPR exemptions generally, and a few specifically oppose an exemption for renewable resources, arguing that all subsidies should be mitigated.[339]

c. <u>Commission Determination</u>

173. We find that a limited exemption for renewable resources[340] receiving support from state-mandated or state-sponsored RPS programs[341] is just and reasonable. Therefore, we direct PJM to include an RPS Exemption for resources receiving a State Subsidy through a currently existing state-mandated or state-sponsored RPS program if the resource fulfills at least one of these criteria: (1) has successfully cleared an annual or incremental capacity auction prior to this order; (2) has an executed interconnection construction service agreement on or before the date of this order; or (3) has an

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[336] Buyers Group Reply Testimony at 9-13. Buyers Group notes the growth in demand for voluntary RECs and states that in 2017, nearly half of all voluntary market sales of renewable energy were unbundled REC sales (e.g., not compliance bulk sales). Buyers Group Reply Testimony at 11-12; *see also* Clean Energy Industries Reply Testimony at 9; Clean Energy Advocates Reply Testimony at 13-14; Microsoft Reply Testimony at 5-7.

[337] Microsoft Reply Testimony at 4-6.

[338] *Id*. at 6-7.

[339] *See, e.g.*, Vistra Initial Testimony at 16; ACCC/NMA Initial Testimony at 4.

[340] Renewable resource as used in the RPS Exemption means Intermittent Resource as defined in the PJM Tariff as "a Generation Capacity Resource with output that can vary as a function of its energy source, such as wind, solar, run of river hydroelectric power and other renewable resources." PJM Tariff, Art. 1.

[341] RPS programs include only those state-mandated or state-sponsored programs which subsidize or require the procurement or development of energy from renewable resources.

unexecuted interconnection construction service agreement filed by PJM for the resource with the Commission on or before the date of this order.

174. We find that this limited exemption for resources participating in RPS programs is just and reasonable because decisions to invest in those resources were guided by our previous affirmative determinations that renewable resources had too little impact on the market to require review and mitigation.[342] However, that assessment of renewable resource participation in the market has changed.[343] The evidence in this proceeding shows that RPS programs are growing at a rapid pace, and resources participating in these programs will increasingly have the ability to suppress capacity market prices.[344] Accordingly, a new renewable resource that does not meet the exemption requirements set forth above and that receives support from a state-mandated or state-sponsored RPS program or other State Subsidies and offers into the PJM capacity market will be subject to the default offer price floor unless it can justify a lower offer through a Unit-Specific Exemption.[345]

175. This division in the treatment of renewable resources recognizes the increasing amount of State Subsidies for these resources and the increasing potential for RPS resources to suppress capacity prices. The record demonstrates that, as a part of RPS programs, states are providing or requiring meaningful State Subsidies to renewable resources in the PJM capacity market, and that such support is projected to increase substantially in the future. PJM estimates that nearly 5,000 MW of renewable energy

[342] *See, e.g.*, 2013 MOPR Order, 143 FERC ¶ 61,090 at PP 166-167; 2011 MOPR Order, 135 FERC ¶ 61,022 at PP 152-153; 2011 MOPR Rehearing Order, 137 FERC ¶ 61,145 at P 111.

[343] In addition, as our discussion of materiality thresholds indicates, the Commission has altered its prior determination that permitting small amounts of uneconomic entry is reasonable if the impact on market prices is arguably limited. *See supra* PP 98-99; *cf.* CASPR Order, 162 FERC ¶ 61,205 at P 24 (accepting modifications to the MOPR used in ISO-New England to transition away from the Renewable Resource Technology exemption, which was premised on claims it "would adequately limit the impact of out-of-market state actions on [Forward Capacity Market] prices").

[344] *See* June 2018 Order, 163 FERC ¶ 61,236 at P 151.

[345] As we explained above, this does not prevent states from exercising their jurisdiction to make generation-related decisions under FPA section 201. States may choose to acquire whatever generation resources they like, but it remains the duty of this Commission to ensure that those choices do not cause unjust, unreasonable, or unduly discriminatory or preferential rates for wholesale transactions in interstate commerce. *See, e.g.*, *Connecticut PUC*, 569 F.3d at 481; *supra* note 23.

was needed to meet the 2018 RPS program requirements in PJM, but conservatively projects that will increase to over 8,000 MW of renewable energy capacity by 2025. PJM asserts that these needs will further increase to 8,866 MWs by the end of 2033.[346] The record also shows that support for renewable resources through RPS programs drives the proliferation of these resources in the market.[347] Regardless of how volatile and uncertain revenue from RPS programs may be, it is still a State Subsidy that has the ability to influence capacity market prices. Thus, because State Subsidies from state RPS programs are projected to grow significantly, we find that it is just and reasonable to mitigate resources receiving support through state-mandated and state-sponsored RPS programs, on the prospective basis outlined above.

176. In addition, as noted above, we reiterate that State Subsidies at any level are capable of suppressing capacity market prices. We therefore find that RECs procured as part of a state-mandated or state-sponsored procurement process are State Subsidies. As to voluntary REC arrangements, meaning those which are not associated with a state-mandated or state-sponsored procurement process, based on the record in this proceeding, we agree with intervenors that it is not possible, at this time, to distinguish resources receiving privately funded voluntary RECs from state-funded or state-mandated RECs because resources typically do not know at the time of the auction qualification process how the REC will be eventually used.

177. We disagree with intervenors that RPS programs are not subsidies as contemplated in the June 2018 Order, or that RPS programs will not have the ability to impact capacity market prices or bidding behavior going forward. The June 2018 Order found that the existing MOPR was unjust and unreasonable because it did not account for resources receiving out-of-market state subsidies, including RPS programs, and that such subsidies have the ability to influence capacity market prices, regardless of intent.[348] Because of the Unit-Specific Exemption, if a renewable resource receiving support from a state-mandated or state-sponsored RPS program is competitive in the absence of the State Subsidy, then the expanded MOPR will have no impact. As noted in the materiality threshold discussion above, we disagree with PJM that resources with an unforced capacity of less than 20 MWs, which includes many renewable resources, do not have the ability to influence capacity market prices.

[346] June 2018 Order, 163 FERC ¶ 61,236 at PP151-152 (citing PJM Transmittal Letter, Docket No. ER18-1314-000, Giacomoni Aff. at 9-10 and Att. 1).

[347] PJM Transmittal Letter, Docket No. ER18-1314-000, Att. F, Giacomoni Aff. at 7-8.

[348] June 2018 Order, 163 FERC ¶ 61,236 at P 151.

3. Self-Supply Exemption

a. PJM's Proposal

178. PJM proposes to re-implement its previously approved exemption for self-supply resources,[349] i.e., resources owned by a public power entity (cooperative or municipal utility), a vertically integrated utility subject to traditional bundled rate regulation, or a LSE that serves retail-only customers under the same common control.[350] In other words, PJM would not treat these resources as receiving a Material Subsidy simply because the energy or capacity they produce has been purchased through a state-directed procurement.[351] According to PJM, the Commission has recognized that the traditional business models for capacity procurement for self-supply entities do not give rise to artificial price suppression concerns.[352]

179. Under PJM's proposal, all existing self-supply resources would be exempt from the MOPR,[353] and new self-supply resources that receive a Material Subsidy would be

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[349] PJM Initial Testimony at 32-34 (citing 2013 MOPR Order, 143 FERC ¶ 61,090 at P 111).

[350] *Id*. at 32-33.

[351] In its reply testimony, PJM clarifies that the element of the phrase in the definition of Material Subsidy that includes subsidies "received as a result of the procurement of electricity or other attribute from an existing Capacity Resource" should not be broadly interpreted so as to include any state-directed capacity procurement. Rather, PJM intends the definition to be narrowly applied "so that if a resource is supported by the state through a procurement contract that is tendered to meet public policy goals such as to encourage clean energy production *and* accompanied by financial support in the form of actionable subsidies (as that term is defined in PJM's Tariff)," that would be treated as a subsidy like a ZEC or REC. PJM Reply Testimony at 13 (citing Exelon Initial Testimony at 16-21).

[352] PJM Initial Testimony at 33 (citing 2013 MOPR Order, 143 FERC¶ 61,090 at P 111).

[353] *Id*. at 33-34. PJM clarifies that self-supply LSEs do not have to submit an exemption request for each of their resources, and any new resources of self-supply LSEs that fall within the net-short and net-long thresholds would similarly be exempt. PJM Reply Testimony at 15.

exempt to the extent they meet PJM's net-short and net-long thresholds.[354] PJM asserts that these thresholds ensure that sellers do not have an opportunity to suppress clearing prices (for example, by "dumping" excess capacity into the BRA, suppressing capacity prices).[355] PJM claims that these thresholds cannot be applied to existing resources because, while PJM can objectively determine whether new resources would violate the thresholds, PJM would have to make a subjective and arbitrary determination to identify which existing resources in a seller's portfolio are, in the example of a seller who is net-long, "excess," versus which resources are needed to meet its retail demand and thus should be designated as subject to the MOPR.[356]

b. Intervenor Positions

180. Several intervenors argue in favor of a self-supply, public power, or vertically integrated utility exemption.[357] These intervenors make a number of arguments, including that these entities cannot or do not have incentive to exercise the buyer-side market power price suppression concerns that the MOPR is designed to address;[358] that

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[354] If a resource is net-short on capacity, its owned and contracted capacity is less than its capacity obligation. If a resource is net-long on capacity, it has more capacity than it needs to meet its capacity obligation.

[355] PJM Reply Testimony at 15. PJM states that these thresholds were approved in the 2013 PJM MOPR Order and reaffirmed by PJM stakeholders last year. PJM Initial Testimony at 33.

[356] PJM Initial Testimony at 33-34.

[357] *See, e.g.*, Allegheny Initial Testimony at 6; ELCON Initial Testimony at 7; Dominion Initial Testimony at 3, 11-13; AMP/PPANJ Initial Testimony at 17-27; AEP/Duke at 7-8; Buckeye Initial Testimony at 5-6, 10-11 (supporting a self-supply exemption, as a minimum, if a workable resource-specific FRR is not implemented); EKPC Initial Testimony at 6-10; APPA Initial Testimony at 5-27 (arguing that the Commission should either exclude public power self-supply resources from the MOPR entirely, or adopt a broad exemption); Kentucky Commission Initial Testimony at 3-4 (asserting that vertically integrated utilities should be excluded entirely from the MOPR); NOVEC Initial Testimony at 7-8; NRECA Initial Testimony at 17-18; OCC Initial Testimony at 6; ODEC Initial Testimony at 6-12; OPSI Initial Testimony at 14; PJM Consumer Representatives Initial Testimony at 20; SMECO Initial Testimony at 4; Virginia SCC Initial Testimony at 2; AMP Reply Testimony at 11-12.

[358] *See, e.g.*, Allegheny Initial Testimony at 7 (citing Commission findings in 2013 MOPR Order, 143 FERC ¶ 61,090); AMP/PPANJ Initial Testimony at 20-27; Dominion Initial Testimony at 12; EKPC Initial Testimony at 7-8; Kentucky Commission Initial Testimony at 3; NOVEC Initial Testimony at 7; ODEC Initial Testimony at 9; Virginia

these entities do not distort the PJM capacity market;[359] that applying the MOPR to these entities could result in consumers paying twice for capacity or incurring the cost of stranded investment;[360] and that the Commission has previously exempted these resources.[361] NOVEC argues that not exempting self-supply resources would result in an artificial increase of market prices without any benefit to customers.[362]

181. Other intervenors argue self-supply should be exempted as a long standing traditional business model.[363] APPA argues that there is no evidence of increased out-of-market support for public power self-supply, and, given that the public power business model has been in existence for over one hundred years, there are no changed

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SCC Initial Testimony at 2; AMP/PPANJ Initial Testimony at 27; NRECA Initial Testimony at 19.

[359] *See, e.g.*, APPA Reply Testimony at 12-13; AMP/PPANJ Initial Testimony at 8-17; Virginia SCC Initial Testimony at 2; Michigan Parties Reply Testimony at 6; ODEC Reply Testimony at 9; *see also* Dominion Initial Testimony, Aff. Spees and Newell at 14; Dominion Reply Testimony at 5; IMEA Reply Testimony at 14 (arguing vertically integrated utilities maintain a balance of supply and demand that precludes such entities from suppressing capacity prices);AMP/PPANJ Initial Testimony at 16-17, Norton Aff. at PP 7-12 (arguing the federal tax incentives received by such entities to build generation do not permit over-building or market manipulation).

[360] Dominion Initial Testimony at 8; Allegheny Initial Testimony at 8; APPA Initial Testimony at 10; APPA Initial Testimony at 16-17; Buckeye Initial Testimony at 12; NRECA Initial Testimony at 3; ODEC Initial Testimony at 8; Virginia SCC Initial Testimony at 2.

[361] Dominion Initial Testimony at 12 (citing 2013 MOPR Order, 143 FERC ¶ 61,090 at P 111); APPA Initial Testimony at 17-20 (citing 2013 MOPR Order, 143 FERC ¶ 61,090)); NRECA Initial Testimony at 23 (citing 2015 MOPR Order, 153 FERC ¶ 61,066 at PP 36-38); ODEC Initial Testimony at 8-9; EKPC Initial Testimony at 9 (citing 2013 MOPR Order, FERC ¶ 61,090 at P 111); IMEA Reply Testimony at 15; Virginia SCC Initial Testimony at 2; AMP/PPANJ Initial Testimony at 17-20.

[362] NOVEC Initial Testimony at 5.

[363] *See, e.g.*, Allegheny Initial Testimony at 6-8; Buckeye Initial Testimony at 7-8, 11; NRECA Initial Testimony at 3; ODEC Initial Testimony at 9; AMP/PPANJ Initial Testimony at 20-24; NOVEC Initial Testimony at 5.

circumstances warranting labeling public power self-supply out-of-market support.[364] According to Dominion, self-supply entities have participated in the capacity market for years prior to price suppression becoming an issue, which demonstrates that such entities do not suppress prices.[365]

182. Some intervenors argue that public power entities are distinguishable from investor-owned utilities because public power or self-supply entities engage in long-term supply arrangements through asset ownership to act in the best interests of their customers and must be able to use these resources to meet capacity obligations in order to avoid unreasonable harm to ratepayers and public power entities.[366] In contrast, AMP/PPANJ states that investor-owned utilities and independent power producers are profit driven and have an incentive to increase capacity prices.[367] According to AMP/PPANJ, if these other business models receive a state subsidy, unlike public power entities, they do not have an obligation to reduce retail rates.[368]

183. APPA contends that accommodating public power self-supply resources would mitigate concerns that the merchant model is heavily relied upon in PJM.[369] APPA argues that merchant developers do not pursue long-term resource planning and notes that PJM recently determined that increased reliance on a single resource type increases resilience concerns.[370] APPA states that self-supply represents a stable form of resource procurement via bilateral contracting and ownership of resources by states, utilities, and large customers.[371]

[364] APPA Initial Testimony at 13.

[365] Dominion Reply Testimony at 9.

[366] AMP/PPANJ Initial Testimony at 22-24; *see also* NRECA Reply Testimony at 7.

[367] AMP/PPANJ Initial Testimony at 13-14.

[368] *Id.* at 14.

[369] APPA Initial Testimony at 22-23.

[370] *Id.* at 22 (citing PJM's Evolving Resource Mix and System Reliability, PJM Interconnection, L.L.C. (Mar. 30, 2017)).

[371] *Id*. at 23.

184. Some intervenors argue that public power[372] or vertically integrated[373] self-supply resources do not receive the type of subsidies discussed in the June 2018 Order.[374] Similarly, ODEC argues that cooperatives do not receive state subsidies because they recover costs through a cost of service formula rate and not through a state-mandated subsidy.[375] AEP/Duke support an exemption for all regulated retail rate constructs.[376] The Kentucky Commission asserts the retail rates set by the Kentucky Commission should not be considered Material Subsidies.[377] IMEA similarly argues that municipality, local government, or municipal joint action agencies acting in their proprietary, non-governmental capacity, to fulfill long-term service obligations of their own customers and funded by the rates paid by such customers, not taxes paid by their citizens, are not government subsidies.[378]

185. Several intervenors also argue that self-supply entities do not make decisions based on the PJM capacity market's comparatively short-term outlook, but rather longer term obligations and non-price factors, and their investments are not constrained by the capacity market's three year horizon.[379] Some intervenors point to state or local commissions that oversee self-supply entities and ensure they are acting judiciously in the best interests of their customers.[380] ODEC asserts that without an exemption to the

[372] SMECO Initial Testimony at 4; AMP/PPANJ Initial Testimony at 10, 14-17; AMP Reply Testimony at 12; APPA Initial Testimony at 5.

[373] Virginia SCC Initial Testimony at 2.

[374] *See, e.g.*, AEP/Duke Initial Testimony at 4; NRECA Initial Testimony at 17; APPA Initial Testimony at 11-12.

[375] ODEC Initial Testimony at 11.

[376] AEP/Duke Initial Testimony at 5.

[377] Kentucky Commission Initial Testimony at 3.

[378] IMEA Reply Testimony at 9.

[379] *See, e.g.*, Allegheny Comment at 7-8; NRECA Initial Testimony at 17; NOVEC Initial Testimony at 7; AMP/PPANJ Initial Testimony at 15-16; AMP/PPANJ Initial Testimony at 13-14; AMP Reply Testimony at 13; APPA Reply Testimony at 14-15; ODEC Initial Testimony at 6, 11.

[380] *See, e.g.*, EKPC Initial Testimony at 9; Dominion Initial Testimony, Aff. of Dr. Kathleen Spees & Dr. Samuel A. Newell at 17; Dominion Reply Testimony at 10

MOPR, self-supply entities will not have an incentive for the long-term investments the Commission has encouraged.[381]

186. Some intervenors emphasize that self-supply is a legitimate capacity procurement mechanism that is compatible with capacity markets and relies on competition to ensure low cost service to customers.[382] NRECA argues that the customer-owners of public power entities bear any gain or loss associated with investment decisions, and the public power entity business model—i.e., ownership structure, tax treatment, and resource selection process—is consistent with and benefits from the competitive market framework.[383]

187. Some intervenors reject the idea that all resource entry and exit in the market should be considered economic or, similarly, that all capacity must be procured in the capacity market to be economic.[384] Some intervenors also argue that not exempting self-supply would prioritize future signals for future investors over the decisions made by investors building under the existing rules.[385] ODEC argues that there is nothing unique about capacity market revenues that make them more legitimate than revenue from bilateral contracts.[386] NRECA argues that an exclusion from the MOPR for self-supply by public power entities is consistent with the initial purpose of the PJM capacity auctions, which was to serve as a residual procurement mechanism of last resort, after LSEs have had an opportunity to self-supply.[387]

(arguing also that merchant investment in resources has continued even with self-supply entities participating in the capacity market).

[381] ODEC Initial Testimony at 21.

[382] NRECA Initial Testimony at 3, 20; *see also* APPA Initial Testimony at 6-7, 12-13.

[383] NRECA Initial Testimony at 20.

[384] APPA Initial Testimony at 14; *see also* NRECA Initial Testimony at 20.

[385] IMEA Reply Testimony at 15; APPA Initial Testimony at 15.

[386] ODEC Initial Testimony at 6; *see also* NRECA Initial Testimony at 18; NOVEC Initial Testimony at 8.

[387] NRECA Initial Testimony at 18 (citing *PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,079 at P 71).

188. Some intervenors argue that subjecting self-supply resources to the MOPR would harm the markets. APPA argues that mitigation of public power self-supply resources would result in an economic loss to the resource, reduce market efficiency, undermine the resource's portfolio benefits, and expose public power utility customers to costs that the public power self-supply business model is intended to prevent.[388] APPA asserts that expanding the MOPR to public power self-supply resources would send incorrect price signals to the market.[389] Dominion asserts that imposing a MOPR or other restrictions on self-supply may cause self-supply entities to exit the capacity market, detrimentally impacting customers of both self-supply and merchant resources.[390]

189. IMEA argues that small, transmission-dependent utilities like IMEA and its member municipalities did not need or ask for the RTO markets and use them only because of the decisions made by the transmission-owning utilities upon which they rely. IMEA argues that it does not, therefore, make sense to force IMEA to charge its customers higher rates because other market participants, who may have actively sought the RTO market, are taking actions that adversely affect the capacity market. IMEA states that it is not one of those participants and is not making uncompetitive bids or supporting generation with out-of-market payments. IMEA claims that it made investments in its generation based on the economic environment at the time, and should be able to continue using its resources to serve load regardless of whether it may be more economic for IMEA to buy capacity from the market than to use its own at a specific time.[391]

190. Other intervenors oppose an exemption for self-supply, public power, or vertically integrated utilities, arguing that self-supply resources receive the most extensive form of out-of-market payments via retail cost-recovery and therefore have the greatest potential to suppress market clearing prices.[392] Exelon argues that these resources make up a substantial portion of the PJM portfolio, almost 20 percent of cleared capacity today and

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[388] APPA Initial Testimony at 16-17.

[389] *Id*. at 10.

[390] Dominion Initial Testimony, Aff. of Spees & Newell at 19-20.

[391] IMEA Reply Testimony at 13.

[392] AES Initial Testimony at 14-16; Direct Energy Initial Testimony at 10-11; Clean Energy Advocates Initial Testimony at 2, 20; Exelon Initial Testimony at 5-6, 18-20; Buyers Group Initial Testimony at 11; AEE Initial Testimony at 25; FES Initial Testimony at 7; Market Monitor Initial Testimony at 18; NRG Initial Testimony at 11; P3 Initial Testimony at 12; PSEG Initial Testimony at 7; UCS Initial Testimony at 8; Cogentrix Reply Testimony at 10; EPSA Reply Testimony at 25.

nearly twice the capacity that PJM forecasts will be supported by states for environmental reasons as of 2025.[393] UCS argues that 30 percent of new capacity cleared in the RPM auctions since 2010 was from vertically integrated utilities, far exceeding, UCS claims, the threshold PJM's testimony describes as impacting the clearing price.[394]

191. Some intervenors argue that there is no economic rationale to apply the MOPR to resources receiving environmental attribute payments, but exempt resources receiving guaranteed cost recovery through retail rates.[395] Clean Energy Advocates states that, unlike RECs and ZECs, retail cost-recovery reimburses the resource for the full cost of making capacity available and thus retail cost-recovery is more significant and determinative in impacting bidding behavior than subsidies for RECs and ZECs.[396] Exelon asserts that resources with guaranteed cost recovery through retail rates are not subject to competitive forces and are protected from any negative impacts of their bidding behavior, and cannot, therefore, be considered competitive.[397] P3 notes that, because the self-supply resource owner is assured full prudent cost recovery, regardless of the clearing price, it will have the incentive to offer at zero, and thereby lean on the rest of the market, when convenient, to reduce the costs of carrying surplus capacity at the expense of other load, while at the same time suppressing prices for competitive suppliers.[398]

192. Some intervenors argue that a self-supply exemption would not be consistent with the logic of the June 2018 Order.[399] FES argues that exempting rate-based generation from the MOPR would be unduly discriminatory and preferential, and that there is no

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[393] Exelon Initial Testimony at 19.

[394] UCS Initial Testimony at 4-5.

[395] Exelon Initial Testimony at 5-6, 18; FES Initial Testimony at 7; Clean Energy Advocates Initial Testimony at 20; Clean Energy Advocates Reply Testimony at 9-10.

[396] Clean Energy Advocates Initial Testimony at 20-21; Clean Energy Advocates Reply Testimony at 10; *see also* FES Initial Testimony at 8.

[397] Exelon Initial Testimony at 18.

[398] P3 Initial Testimony at 12-13. P3 states, however, that it would accept PJM's proposed self-supply exemption as a transition mechanism for the 2019 BRA only. P3 Reply Testimony at 8; Clean Energy Advocates Initial Testimony at 20.

[399] FES Initial Testimony at 8; Clean Energy Advocates Initial Testimony at 22-23; Exelon Initial Testimony at 19; Exelon Reply Testimony at 56-60.

basis on which to exempt resources based on the source of funding.[400] Clean Energy Advocates similarly argues that retail cost-recovery decisions result in both retention of uneconomic resources and entry of new uneconomic resources, citing to a number of resources it claims would be uneconomic absent state-approved retail cost recovery.[401] PSEG argues that the self-supply exemption cannot be supported by principled rationale since the Commission has now found the capacity market—with that exemption–to be unjust and unreasonable.[402] UCS states that the Commission's order, and PJM's own rationale and commitment to the "first principles" of capacity markets, do not support a MOPR exemption for state-supported cost recovery.[403] Similarly, Exelon argues that exempting self-supply contradicts the Commission's objectives in the June 2018 Order, including ensuring that participants make competitive offers in the capacity market and increasing transparency for the costs of regulatory choices.[404] Exelon argues it makes little sense for the Commission to mitigate resources receiving environmental attribute payments in order to increase transparency regarding the costs of re-regulation, but exempt regulated resources and thereby obscure the costs of maintaining state regulation.[405]

193. NRG argues a self-supply exemption would cause captive ratepayers to pay for capacity at higher costs than they would have paid in the capacity market and displace merchant generation with subsidized resources.[406] NRG claims the self-supply exemption in effect in PJM from 2013 to 2017 resulted in price suppression.[407]

194. Though self-supply and vertically integrated entities have argued that they have no incentive to exercise buyer-side market power, Exelon contends that the June 2018 Order found that the MOPR should mitigate resources offering noncompetitively regardless of

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[400] FES Initial Testimony at 8; FES Reply Testimony at 10; *see also* UCS Reply Testimony at 3.

[401] Clean Energy Advocates Initial Testimony at 22-23.

[402] PSEG Initial Testimony at 7.

[403] UCS Initial Testimony at 6.

[404] Exelon Initial Testimony at 19; Exelon Reply Testimony at 56-58.

[405] Exelon Initial Testimony at 19.

[406] NRG Initial Testimony at 11.

[407] *Id*. at 11-12.

intent.[408] Exelon similarly disagrees with arguments that such resources should not be mitigated because of their long-standing business models, arguing that this is not an adequate basis for disparate treatment and, in any event, attribute payments are similarly longstanding.[409] Clean Energy Advocates likewise states that if an argument for exempting self-supply is the legitimacy of the business model, then ZEC and REC programs are similarly legitimate.[410] Direct Energy argues that there is no basis to distinguish one resource from another based on corporate structure.[411]

195. NRG's witness Mr. Stoddard asserts that a self-supply exemption would allow "net short entities that rely on the purchase of top-up capacity from the RPM" to benefit from the resulting market price suppression of below-cost offers, and would allow net long entities "to push uneconomic resources into the market, displacing lower cost resources," that would be profitable if the self-supply entity would otherwise have borne the full cost of maintaining this uneconomic supply.[412]

196. With regard to net-short/net-long thresholds, some intervenors support PJM's proposed net-short and net-long thresholds, arguing they would effectively deter self-supply entities from attempting to suppress prices.[413] Some intervenors support the thresholds only for new resources[414] and argue there is no need to apply them to existing

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[408] Exelon Initial Testimony at 19 (citing June 2018 Order, 163 FERC ¶ 61,236 at P 155); *see also* FES Reply Testimony at 11 (arguing that self-supply resources contribute to price suppression).

[409] Exelon Initial Testimony at 20; Exelon Reply Testimony at 59 n.195; Clean Energy Advocates Reply Testimony at 10; FES Reply Testimony at 11.

[410] Clean Energy Advocates Reply Testimony at 10.

[411] Direct Energy Initial Testimony at 11; *see also* ACORE Initial Testimony at 1-3 (while not opposing a self-supply exemption, noting that the MOPR should be applied evenly across resource types).

[412] NRG Initial Testimony, Stoddard Aff. at P 17.

[413] AMP/PPANJ Initial Testimony at 24-27 (arguing that public power entities do not have the ability to manipulate the market, but nonetheless supporting the thresholds). Although objecting to the self-supply exemption overall, Exelon asserts that if the exemption is nevertheless approved, it should not be applied to net long resources. Exelon Reply Testimony at 59-60.

[414] Buckeye Initial Testimony at 5-6, 10-11; Buckeye Reply Testimony at 2 (supporting thresholds for new resources that have not cleared the capacity market);

resources.[415] Michigan Parties argue that the net-short/net-long thresholds allow vertically integrated resources to better match their capacity to their load in the short term, as well as trade excess capacity, resulting in cost savings for their customers and increased efficiency for the PJM system as a whole.[416]

197. IMEA notes that the sales cap restriction for the existing FRR option is set at 25 percent up to certain caps, but that PJM departs from their value without explanation and proposes 15 percent for the mid-sized LSE MOPR exemption.[417]

198. EKPC states the net-long threshold is not required for the self-supply exemption to be just and reasonable, as municipal and cooperatives utilities do not have incentives to engage in market activities that suppress energy market prices, and that under the proposed expanded MOPR, net-long and net-short thresholds for new and existing resources are not workable because it would be impossible to determine which resources are in excess of the LSE's own load.[418] EKPC also contends that being long in capacity can provide other hedges. Specifically, EKPC notes that it is subject to a fuel adjustment clause that limits recovery of the costs of market energy purchases to its highest-cost unit. EKPC explains that it can therefore be very costly for EKPC to be short.[419] EKPC argues a net-long threshold based on non-coincident peak load provides the correct structure for the specific hedging associated with self-supply resources.[420] EKPC notes that a similar approach has been previously accepted by the Commission.[421]

199. EKPC also recommends the net-long threshold not be a fixed MW quantity but rather a percentage, so that self-supply utilities could develop new generation that is not

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Dominion Reply Testimony at 5-6.

[415] APPA Initial Testimony at 25-27 (stating that a competitive offer for an existing resource would be low regardless of out-of-market support); ODEC Initial Testimony at 19 (noting that the threshold values should be the same as those that existed under the prior self-supply exemption and that a blanket exemption is preferable).

[416] Michigan Parties Reply Testimony at 8-9.

[417] IMEA Reply Testimony at 12.

[418] EKPC Initial Testimony at 11.

[419] *Id*. at 12 -13.

[420] *Id*. at 13.

[421] *Id*. at 13-14 (citing 2013 MOPR Order, 143 FERC ¶ 61,090 at P 114).

subject to MOPR rules.[422] EKPC contends that a utility developing a new plant to replace old generation may be considered to have excess capacity, but this should not be considered a business strategy to suppress capacity market prices.[423] EKPC concludes that a net-long threshold using a percentage of a LSE's non-coincident peak would allow for integration of new facilities without adverse impacts.[424]

200. Allegheny argues that PJM's net-short proposal to define Multi-State Public Power Entity as excluding a public power entity that has more than 90 percent of its load in any one state is unnecessary and discriminatory. Allegheny reasons that, because public power entities makes up a very small percentage of load served in PJM markets, such entities would not suppress prices.[425]

201. Some intervenors also disagree with PJM that the proposed net-long/net-short thresholds will help mitigate any concerns that self-supply could suppress prices. Clean Energy Advocates argue net-short/net-long thresholds are inconsistent with the new purpose of the MOPR, which is not related to price suppressive intent. Clean Energy Advocates note that, although the Commission has previously accepted similar thresholds for a self-supply exemption, the MOPR and accompanying thresholds were based on a seller's intent.[426]

c. <u>Commission Determination</u>

202. We direct PJM to include a Self-Supply Exemption for resources owned by self-supply entities[427] that fulfill at least one of these criteria: (1) have successfully cleared an annual or incremental capacity auction prior to this order; (2) have an executed interconnection construction service agreement on or before the date of this order; or (3) have an unexecuted interconnection construction service agreement filed by PJM for the resource with the Commission on or before the date of this order. As with RPS resources, we grandfather existing self-supply resources and limited new self-supply

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[422] *Id*. at 15.

[423] *Id*.

[424] *Id*. at 15-16.

[425] Allegheny Initial Testimony at 8-9.

[426] Clean Energy Advocates Initial Testimony at 23.

[427] These entities include vertically integrated utilities that receive cost of service payments for plants constructed and operated under state public utility regulation, public power, and single customer entities.

resources that have an interconnection construction service agreement as discussed in this order, but apply the MOPR to any new self-supply resource that receives or is entitled to receive a State Subsidy, unless they qualify for one of the exemptions described in this order. New State-Subsidized Resources that do not meet the exemption criteria above will be subject to the applicable default offer price floor regardless of whether they are owned by a self-supply entity. Self-supply entities that prefer to craft their own resource adequacy plans remain free to do so through the existing FRR Alternative in PJM's Tariff.

203. We find that it is just and reasonable to exempt self-supply resources that meet the requirements of the exemption outlined above because self-supply entities have made resource decisions based on affirmative guidance from the Commission indicating that those decisions would not be disruptive to competitive markets.[428] In order to limit disruption to the industry and preserve existing investments, we find it is just and reasonable to exempt resources owned by self-supply entities that have cleared an annual or incremental PJM capacity auction prior to this order, and to exempt certain limited new resources that have executed an interconnection construction service agreement or for whom PJM has filed an unexecuted interconnection construction service agreement on or before the date of this order. However, the self-supply exemption authorized in 2013 was a temporary reversal in Commission policy that the Commission rejected in acting on the remand of *NRG*, and we agree with intervenors that self-supply entities may have the ability to suppress prices going forward.[429] Therefore, we find that self-supply entities should not have a blanket exemption for any new State-Subsidized Resources they intend to own going forward. We see no reason to treat new resources owned by self-supply entities differently from resources owned by other types of electric utilities, and reiterate that we can no longer assume "that there is any substantive difference among the types of resources participating in PJM's capacity market with the benefit of out-of-market support."[430]

204. At bottom, a blanket self-supply exemption rests on the premise that some kinds of entities should face less risk than others in choosing whether to build their own generation resources or rely on the market to satisfy their energy and capacity requirements. We are not persuaded that premise is correct. For example, in a regional market dominated by states with retail competition, it is not clear why utilities in states

[428] 2013 MOPR Order, 143 FERC ¶ 61,090 at P 107 (accepting PJM's proposed self-supply exemption); 2015 MOPR Order, 153 FERC ¶ 61,066 at PP 52, 56.

[429] *See supra* PP 20-21.

[430] June 2018 Order, 163 FERC ¶ 61,236 at P 155; 2011 ISO-NE MOPR Order, 135 FERC ¶ 61,029 at PP 170-71 (out-of-market support allows uneconomic entry).

that prefer the vertical integration model should be afforded a competitive advantage.[431] Moreover, the record suggests that new self-supply capacity is significant, representing 30 percent of new generation added to PJM in capacity auctions from 2010 to 2017.[432] Since these resources may receive State Subsidies permitting uneconomic entry into PJM's capacity market, regardless of intent, we find that it is not just and reasonable to exempt new self-supply from application of the applicable default offer price floor. New self-supply resources that receive or are entitled to receive State Subsidies, as detailed in this order, may avail themselves of the Unit-Specific Exemption. In addition, self-supply entities that do not want to be subject to the MOPR may opt for the existing FRR Alternative.

4. Demand Response, Energy Efficiency, and Capacity Storage Resources Exemption

a. PJM's Proposal

205. PJM proposes that demand response resources will be subject to the MOPR, but that energy efficiency resources should be excluded, arguing that energy efficiency resources are a result of reduced consumption and energy conservation, which are on the demand side of the equation, and do not raise price suppression concerns.[433]

b. Intervenor Positions

206. Some intervenors support exempting demand-side management resources such as demand response and energy efficiency resources from the MOPR.[434] AEE argues that demand response and energy efficiency resources should be exempt because there is no

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[431] As the Commission has previously explained, regional markets are not required to have the same rules. Our determination about what rules may be just and reasonable for a particular market depends on the relevant facts. For example, ISO New England proposed to address the complex issues raised by state subsidies through its CASPR approach. *See* CASPR Order, 162 FERC ¶ 61,205 at PP 20-26. And different rules may be appropriate in markets dominated by vertically integrated utilities, like the Midcontinent ISO. *See Midcontinent Indep. Sys. Operator, Inc.*, 162 FERC ¶ 61,176, at P 57 & n.133 (2018) (listing cases that reject the "one-size-fits-all approach").

[432] UCS Initial Testimony at 4-5 (citing PJM 2018 April Filing at 9-10).

[433] PJM Initial Testimony at 15 n.20.

[434] AEE Initial Testimony at 20; Joint Consumer Advocates Initial Testimony at 14; *see also* Buyers Group Initial Testimony at 11; DC Commission Initial Testimony at 6; Pennsylvania Commission Reply Testimony at 15.

record evidence to demonstrate they receive the kind of support the Commission described in the June 2018 Order. AEE contends that demand response resources are fundamentally different than traditional generating resources, because they are charged for their retail peak capacity demand via retail pass-throughs of PJM's wholesale capacity charges, which generators are not.[435] Further, AEE states that demand response resources differ from generators in that they will stay in business regardless of price. Rather than participating in the capacity market to earn a return on their investment, demand response participates in the market to lower capacity costs.[436] AEE also argues that any default offer price floor to which demand response or energy efficiency resources are subject would be zero, because these resources have low avoidable costs, and so it would be administratively burdensome and make little sense to subject these resources to the MOPR. Conversely, OCC argues that demand response and distributed energy resources[437] funded by captive retail customers should not be exempt from MOPR. OCC further states that the Commission should clarify that distributed energy resources fall within the scope of demand response, and should include them within the scope of the MOPR if they receive subsidies.[438] FEU also argues that wholesale demand response should be subject to the MOPR because wholesale demand response is paid twice under the Commission's rules, and there is no principled reason to justify the exclusion.[439]

207. SMECO requests that the Commission direct PJM to provide an exemption for demand response resources that were recently capacity resources but may have paused

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[435] AEE Initial Testimony at 20.

[436] *Id*. at 21.

[437] OCC cites to the Commission's definition of distributed energy resources as defined as a source or sink of power that is located on the distribution system, any subsystem thereof, or behind a customer meter. These resources may include, but are not limited to, electric storage resources, distributed generation, thermal storage, electric vehicles and their supply equipment, typically solar, storage, energy efficiency, or demand management installed behind the meter. OCC Initial Comments at 8 (citing *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators Electric Storage Participation in Regions with Organized Wholesale Electric Markets*, 157 FERC ¶ 61,121, at P1, n.2 (2016)).

[438] OCC Initial Testimony at 7. AES also supports subjecting demand response and distributed energy resources to the MOPR. AES Reply Testimony at 10.

[439] FEU Reply Testimony at 7.

recent RPM participation due to 100 percent performance rules.[440] SMECO requests that the Commission direct PJM to view such lapsed demand response programs as existing and not planned.[441]

c. Commission Determination

208. We direct PJM to include a limited exemption for demand response, energy efficiency, and capacity storage resources. Demand response and energy efficiency resources that fulfill at least one of these criteria will be eligible: (1) have successfully cleared an annual or incremental capacity auction prior to this order; (2) have completed registration on or before the date of this order; or (3) have a measurement and verification plan approved by PJM for the resource on or before the date of this order. Capacity storage resources that fulfill at least one of these criteria will be eligible: (1) have successfully cleared an annual or incremental capacity auction prior to this order; (2) have an executed interconnection construction service agreement on or before the date of this order; or (3) have an unexecuted interconnection construction service agreement filed by PJM for the resource with the Commission on or before the date of this order. Similar to the RPS Exemption, we find that it is reasonable to exclude these existing and limited new resources with an interconnection construction service agreement, registration, or approved measurement and verification plan from mitigation because traditionally they have been exempt from application of the MOPR[442] and market participants that reasonably relied on that guidance in formulating their business plans prior to the June 2018 Order were not on notice that they would be mitigated. We disagree with intervenors that demand response and energy efficiency resources should always be exempt from review and mitigation.[443] The replacement rate directed in this order is focused on ensuring that all resources make economic offers based on their expected costs and not any State Subsidies they may receive, regardless of resource type, and thus we find that it is just and reasonable to require new demand response, energy efficiency, and capacity storage resources that do not meet the above criteria to comply with the

[440] SMECO Initial Testimony at 8.

[441] *Id*. at 9.

[442] *See, e.g.*, 2017 MOPR Remand Order, 161 FERC ¶ 61,252 at P 41 (rejecting PJM's 2012 MOPR filing thereby re-instituting the 2013 MOPR rules which did not mitigate demand response, energy-efficiency or storage resources); 2013 MOPR Order, 143 FERC ¶ 61,090 at P 166 (applying the MOPR to gas-fired resources only).

[443] The fact that these resources participate in the capacity market reveals that they are capacity resources. If they are not capacity resources, then they should not participate in the capacity market and receive payments as capacity resources.

applicable default offer price floor if they do not qualify for a Competitive Exemption or Unit-Specific Exemption.

209. However, we grant SMECO's request for a limited exemption for existing demand-side resources that have paused participation in the capacity market due to Capacity Performance. We recognize that, because demand-side resources were not previously subject to the MOPR, these resources may have made the decision to lapse participation in the capacity market based on earlier Commission directives. Given this policy shift, we find that it is just and reasonable to grant a one-time exemption for existing demand-side resources that have lapsed participation in the capacity market. If such resources have previously cleared a capacity auction, we find they should be considered existing for the delivery year 2022/2023 capacity auction. We clarify that this is a one-time exemption. After the next BRA, demand-side resources seeking to re-enter the capacity market will be treated as new, consistent with treatment of repowered resources.

5. Unit-Specific Exemption

a. PJM's Proposal

210. PJM proposes to replace its existing unit-specific exception, which applies to new resources, with a similar but broader provision that would apply to both new and existing resources.[444] Specifically, PJM proposes that a market participant intending to submit a sell offer for a State-Subsidized Resource in any RPM auction may, at its election, submit a request for a unit-specific default offer price floor determination no later than one hundred twenty (120) days before the relevant RPM auction.[445]

b. Intervenor Positions

211. A number of intervenors generally support PJM's proposal to allow for a resource-specific exemption for both new and existing resources that justify offers below the default offer price floor.[446] The Illinois Attorney General argues that, to the extent the Commission allows PJM to set unit-specific offer price floors, it should require that the unit-specific data come exclusively from FERC Form 1 reports to impose consistency

[444] PJM Initial Testimony at 39; *see also* PJM Answer at 2-3.

[445] *Id*. Attach. A, proposed Tariff, Att. DD, § 5.14(h)(iv)(B).

[446] *See, e.g.*, API Initial Testimony at 21-22; Brookfield Reply Testimony at 4; Clean Energy Advocates Initial Testimony at 15; IPP Coalition Initial Testimony at 6; LS Power Reply Testimony at 7; OCC Initial Testimony at 5; Vistra Initial Testimony at 16; Pennsylvania Commission Reply Testimony at 14-15.

among submissions and enable transparency. The Illinois Attorney General further argues that the Net ACR calculation for the unit-specific offer price floor should not be limited to projected PJM market revenues, as in the existing unit-specific review process, but should also include out-of-market revenues or state subsidies, to accurately determine the revenues still needed to cover costs and allow the unit to continue to operate as a capacity resource.[447]

212. Other intervenors oppose a unit-specific exemption.[448] Exelon argues that the unit-specific exemption process sets administrative prices based on the Market Monitor's assessment of the unit's costs, rather than competitive forces, and is thus opaque to outsiders, highly subjective, and needlessly complex.[449]

213. Finally, PSEG argues the unit-specific exemption process should be eliminated because it is too unwieldly and burdensome to accommodate review of the additional resources under an expanded MOPR.[450]

c. Commission Determination

214. We direct PJM to maintain the Unit-Specific Exemption, expanded to cover existing and new State-Subsidized Resources of all resource types, to permit any resource that can justify an offer lower than the default offer price floor to submit such bids to PJM for review. This will operate as a unit-specific alternative to the default offer price floor, as discussed above, for both new and existing resources, and will be based on the resource's expected costs and revenues, subject to approval by the Market Monitor. PJM's criteria, parameters, and evaluation processes, moreover, will largely track the Unit-Specific Exemption methodology set forth in PJM's currently-effective Tariff. We direct PJM to submit Tariff language on compliance to implement this directive.

215. We disagree with the Illinois Attorney General that acceptable supporting data for a Unit-Specific Exemption should be limited to FERC Form 1 reports. Suppliers should use the best available data to support their Unit-Specific Exemptions, including non-public cost data of the type not published in FERC Form 1. For example, in some cases, FERC Form 1 filers submit only high-level, aggregated data, which would be insufficient to justify a capacity market offer.

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[447] Illinois Attorney General Initial Testimony at 12.

[448] Exelon Initial Testimony at 30-31; PSEG Initial Testimony at 14.

[449] Exelon Initial Testimony at 30-31.

[450] PSEG Initial Testimony at 14.

216. Finally, we reject Exelon's argument that PJM's evaluation criteria lacks sufficient transparency and that the Unit-Specific Exemption should therefore be eliminated altogether. Given that the Market Monitor is an independent evaluator, we do not see the need for additional transparency at this time. However, we direct PJM to provide more explicit information about the standards that will apply when conducting this review as a safeguard against arbitrary ad hoc determinations that market participants and the Commission may be unable to reliably predict or reconstruct.[451] We also dismiss, as speculative, PSEG's assertion that a Unit-Specific Exemption for existing resources will be unwieldly and burdensome. PJM's default offer price floor for each resource class will remain available should market participants find the Unit-Specific Exemption process burdensome.

E. Transition Mechanisms

217. The June 2018 Order sought comment on "whether any [transition] mechanisms or other accommodations would be necessary . . . to facilitate the transition to [PJM's] new capacity construct."[452] PJM does not propose a transition mechanism for RCO or Extended RCO.[453]

218. A number of intervenors object to the implementation of an expanded MOPR prior to the time that a state-supported resource will be able to adopt new rules and/or legislation, and thereby meaningfully use RCO.[454] Several intervenors propose various

[451] As indicated above, *see supra* note 36, the factors listed in proposed Tariff section 5.14(h)(iv)(B)(2) of PJM's initial filing in the paper hearing appear to present a reasonable objective basis for the analysis of new entrants.

[452] June 2018 Order, 163 FERC ¶ 61,236, at P 170.

[453] PJM Reply Testimony at 32.

[454] *See, e.g.*, ACORE Initial Testimony at 4; Clean Energy Industries Initial Testimony at 23-24; Clean Energy and Consumer Advocates Initial Testimony at 26; Clean Energy and Consumer Advocates Reply Testimony at 71; Joint Stakeholders Initial Testimony at 7; DC People's Counsel Initial Testimony at 15; FEU Initial Testimony at 20; Illinois Attorney General Initial Testimony at 18; Illinois Attorney General Reply Testimony at 15; Illinois Commission Initial Testimony at 6-7; New Jersey Board Initial Testimony at 17; NEI Initial Testimony at 7; Joint Consumer Advocates Reply Testimony at 22-25; Pennsylvania Commission Reply Testimony at 19; PJM Consumer Representatives Reply Testimony at 13; OPSI Initial Testimony at 5; DC Commission Initial Testimony at 9; PSEG August Answer at 3-4

transition mechanisms as a bridge to implementation of a resource-specific FRR Alternative or other market constructs.[455]

219. Because we decline to implement a resource-specific FRR Alternative, we dismiss as moot intervenors requests that a transition mechanism be adopted to facilitate the adoption a resource-specific FRR Alternative. We also decline to implement a transition mechanism for the expanded MOPR discussed herein and expect the next BRA to be conducted under the new rules to provide the necessary and appropriate price signals to capacity resources. On compliance, we direct PJM to provide an updated timetable for when it proposes to conduct the 2019 BRA, as well as the 2020 BRA, as necessary.

The Commission orders:

PJM is hereby directed to submit a compliance filing within 90 days of the date of this order, as discussed in the body of this order.

By the Commission. Commissioner Glick is dissenting with a separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

[455] Direct Energy Initial Testimony at 9-10; NRG Initial Testimony at 42; Eastern Generation Initial Testimony at 2; FEU Initial Testimony at 20-21; Illinois Commission Reply Testimony at 29; PSEG Initial Testimony at 15-16.

Appendix 1

Intervenors in Docket No. EL18-178-000
(With No Prior Party Status)

Acciona Wind Energy USA LLC*
AES Corporation*
Allco Renewable Energy Limited*
Algonquin Energy Services Inc., et al.*
Allegheny Electric Cooperative, Inc.
American Coalition for Clean Coal Electricity*
American Forest & Paper Association*
Appalachian Region Independent Power Producers Association
Brookfield Energy Marketing LP
Carroll County Energy LLC
Cogentrix Energy Power Management, LLC
Connecticut Department of Energy and Environmental Protection
Connecticut Public Utilities Regulatory Authority
Consolidated Edison Energy, Inc.
Deepwater Wind, LLC
Delaware Municipal Electric Corporation
EDF Trading North America, LLC, EDF Energy Services, LLC
and EDP Renewables North America LLC*
Enel Companies*
Energy Capital Partners*
FirstEnergy Solutions Corp.
H-P Energy Resources LLC
Indicated New York Transmission Owners*
Indiana Utility Regulatory Commission*
Industrial Energy Consumers of Pennsylvania*
Lightstone Generation LLC*
Long Island Lighting Company d/b/a Power Supply Long Island
National Mining Association*
Michigan Attorney General*
Microgrid Resources Coalition*
Ohio Manufacturers' Association Energy Group*
Office of the Attorney General for the District of Columbia*
Olympus Power, LLC
Pennsylvania Coal Alliance
Pennsylvania Energy Consumer Alliance*
Potomac Economics, Ltd.*
Public Service Commission of the District of Columbia*
Public Service Commission of Kentucky

Rockland Electric Company
Sabin Center for Climate Change Law
Tenaska Inc.*

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* Motions to intervene out-of-time

Appendix 2

Intervenors Submitting Testimony

Advanced Energy Economy (AEE)
AES Corporation (AES)
Advanced Energy Buyers Group (Buyers Group)
Allco Renewable Energy Limited (Allco)
Allegheny Electric Cooperative, Inc. (Allegheny)
American Coalition for Clean Coal Electricity and National Mining
Association (ACCCE/NMA)
American Council on Renewable Energy (ACORE)
American Electric Power Service Corporation and Duke Energy
Corporation (AEP/Duke)
American Electric Power Service Corporation and FirstEnergy
Utilities Companies (AEP/FEU)
American Forest & Paper Association (AFPA)
American Municipal Power, Inc. (AMP)
with Public Power Association of New Jersey (AMP/PPANJ)
American Petroleum Institute (API)
American Public Power Association (APPA)
American Wind Energy Association, the Solar RTO Coalition, the
Mid-Atlantic Renewable Energy Coalition, and Solar Energy
Industries
Association (Clean Energy Industries)
Avangrid Renewables, LLC (Avangrid)
Borlick Energy Consultancy (Borlick)
Brookfield Energy Marketing LP (Brookfield)
Buckeye Power, Inc. (Buckeye)
Calpine Corporation (Calpine)
Carroll County, *et al.* (IPP Coalition)
Citizens Utility Board, Exelon Corporation, Natural Resources Defense
Council, Nuclear Energy Institute, Office of the Peoples Counsel
For the District of Columbia, PSEG Energy Resources & Trade
LLC, Sierra Club, and Talen Energy Corporation
(Joint Stakeholders)
Cogentrix Energy Power Management, LLC (Cogentrix)
Consumer Advocates, NGOs, and Industry Stakeholders
Direct Energy Business Marketing, LLC, *et al*. (Direct Energy)
Direct Energy Business Marketing, LLC, *et al.* and NextEra Resources, LLC
(Joint Parties)
District of Columbia Attorney General (DC Attorney General)
District of Columbia People’s Counsel (DC People’s Counsel)

District of Columbia Public Service Commission (DC Commission)
Dominion Energy Services, Inc. (Dominion)
East Kentucky Power Cooperative (EKPG)
Eastern Generation, LLC (Eastern Generation)
Electric Power Supply Association (EPSA)
Electricity Consumers Resource Council (ELCON)
Energy Capital Partners IV, LLC (ECP)
Exelon Corporation (Exelon)
FirstEnergy Solutions Corp. (FES)
FirstEnergy Utilities Companies (FEU)
Harvard Electricity Law Initiative (Harvard)
Illinois Attorney General (Illinois Attorney General)
Illinois Citizens Utility Board, West Virginia Consumer Advocate Division, Delaware Division of the Public Advocate, Maryland Office of the People's Council, and Office of the People's Counsel for the District Of Columbia (Joint Consumer Advocates)
Illinois Commerce Commission (Illinois Commission)
Illinois Municipal Electric Agency (IMEA)
Indiana Utility Regulatory Commission (Indiana Commission)
Institute for Policy Integrity (Policy Integrity)
Kentucky Public Service Commission (Kentucky Commission)
Lightstone Generation LLC, Tenaska, Inc., Carrol County Energy LLC, And Energy Capital Partners IV, LLC (Lightstone, *et al*.)
LS Power Associates, L.P. (LS Power)
Maryland Public Service Commission (Maryland Commission)
Microgrid Resources Coalition (Microgrid)
Michigan Public Service Commission, Michigan Agency for Energy, and Michigan Attorney General (Michigan Parties)
Microsoft Corporation (Microsoft)
Monitoring Analytics, LLC, acting as PJM Independent Market Monitor (Market Monitor)
NRG Power Marketing LLC (NRG)
National Rural Electric Cooperative Association (NRECA)
Natural Resources Defense Council, Sierra Club, Sustainable FERC Project, and the Office of the People's Counsel for the District of Columbia (Clean Energy and Consumer Advocates)
Natural Resources Defense Council, Sierra Club, Sustainable FERC Project (Clean Energy Advocates)
New Jersey Board of Public Utilities (New Jersey Board)
Northern Virginia Electric Cooperative, Inc. (NOVEC)
Nuclear Energy Institute (NEI)
Office of the Ohio Consumers' Counsel (OCC)
Old Dominion Electric Cooperative (ODEC)

Organization of PJM States (OPSI)
Pennsylvania Public Utility Commission (Pennsylvania Commission)
PJM Industrial Customer Coalition, Industrial Energy Consumers of America, Illinois Industrial Energy Consumers, the Pennsylvania Energy Consumer Alliance, the Electricity Consumers Resource Council, the Industrial Energy Consumers of Pennsylvania, and Ohio Manufacturers' Association Energy Group (PJM Consumer Representatives)
PJM Interconnection, L.L.C. (PJM)
PJM Power Providers Group (P3)
PSEG Companies (PSEG)
Public Utilities Commission of Ohio (Ohio Commission)
Resources for the Future
Retail Energy Supply Association (RESA)
Rockland Capital, LLC (Rockland)
Sabin Center for Climate Change Law at NYU (Sabin Center)
Shell Energy North America (US), L.P. (Shell)
Southern Maryland Electric Cooperative (SMECO)
Starwood Energy Group Global, L.L.C. (Starwood)
Talen PJM Companies (Talen)
Tenaska Inc. (Tenaska)
Tesla, Inc. (Tesla)
Union of Concerned Scientists (UCS)
Virginia State Corporation Commission (Virginia SCC)
Vistra Energy Corp. and Dynegy Marketing and Trade, LLC (Vistra)
West Virginia Public Service Commission (West Virginia Commission)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Calpine Corporation, Dynegy Inc., Eastern Generation, LLC, Homer City Generation, L.P., NRG Power Marketing LLC, GenOn Energy Management, LLC, Carroll County Energy LLC, C.P. Crane LLC, Essential Power, LLC, Essential Power OPP, LLC, Essential Power Rock Springs, LLC, Lakewood Cogeneration, L.P., GDF SUEZ Energy Marketing NA, Inc., Oregon Clean Energy, LLC and Panda Power Generation Infrastructure Fund, LLC

v.

PJM Interconnection, L.L.C.

PJM Interconnection, L.L.C.

Docket Nos. EL16-49-000
EL18-178-00
(Consolidated)

(Issued December 19, 2019)

GLICK, Commissioner, *dissenting*:

1. From the beginning, this proceeding has been about two things: Dramatically increasing the price of capacity in PJM and slowing the region's transition to a clean energy future. Today's order will do just that. I strongly dissent from today's order as I believe it is illegal, illogical, and truly bad public policy.

2. Today's order has three major elements. First, it establishes a sweeping definition of subsidy that will potentially subject much, if not most, of the PJM capacity market to a minimum offer price rule (MOPR). Second, it creates a number of exemptions to the MOPR that will have the principal effect of entrenching the current resource mix by excluding several classes of existing resources from mitigation. Third, it unceremoniously discards the so-called "resource-specific FRR Alternative,"[1] which had

[1] FRR stands for Fixed Resource Requirement.

been the crux of the Commission's proposal in the June 2018 Order that sent us down the current path.[2]

3. The order amounts to a multi-billion-dollar-per-year rate hike for PJM customers, which will grow with each passing year. It will increase both the capacity price in the Base Residual Auction as well as the already extensive quantity of redundant capacity in PJM. It is a bailout, plain and simple.

4. The order will also ossify the current resource mix. It is carefully calibrated to give existing resources a leg up over new entrants and to force states to bear enormous costs for exercising the authority Congress reserved to the states when it enacted the Federal Power Act (FPA). States throughout the PJM region are increasingly addressing the externalities of electricity generation, including the biggest externality of them all, anthropogenic climate change. We all know what is going on here: The costs imposed by today's order and the ubiquitous preferences given to existing resources are a transparent attempt to handicap those state actions and slow—or maybe even stop—the transition to a clean energy future.

5. But poor policy is only part of the problem. The Commission has bungled the proceeding from the beginning. The June 2018 Order upended the entire market by finding the PJM Reliability Pricing Model (*i.e.*, the capacity market) unjust and unreasonable based on nothing more than theory and a thin record. It was, as former Commissioner LaFleur aptly described it, "a troubling act of regulatory hubris."[3] The Commission then sent PJM back to the drawing board with only vague guidance and nowhere near the time needed to develop a proper solution. Under those circumstances, it should have been no surprise that the Commission found itself paralyzed and unable to act for more than a year after receiving PJM's compliance filing. And while that result may not have been surprising, it was deeply unfair to PJM, its stakeholders, and the region's 65 million customers.

6. Today's order is more of the same. The Commission provides almost no guidance on how its sweeping definition of subsidy will work in practice or how it will interact with the complexities posed by a capacity market spanning 13 very different states and the District of Columbia. In addition, the Commission's abandonment of the resource-specific FRR Alternative—the one fig leaf that the June 2018 Order extended to the state

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[2] *Calpine Corp. v. PJM Interconnection, L.L.C.*, 163 FERC ¶ 61,236 (2018) (June 2018 Order).

[3] *Id.* (LaFleur, Comm'r, dissenting at 5) ("The majority is proceeding to overhaul the PJM capacity market based on a thinly sketched concept, a troubling act of regulatory hubris that could ultimately hasten, rather than halt, the re-regulation of the PJM market.").

authority—will likely culminate in a system of administrative pricing that bears all the inefficiencies of cost-of-service regulation, without any of the benefits. And despite yet another dramatic change in direction, the Commission provides PJM only 90 days to work out a laundry list of changes that go to the very heart of its basic market design. And so, as we embark on yet another round of poorly conceived policy edicts coupled with too little time to do justice to the details, it seems that the Commission has learned none of the lessons from the last year-and-a-half of this saga. It is not hard to understand why states across the region are losing confidence in the Commission's ability to ensure resource adequacy at just and reasonable rates.

I. Today's Order Unlawfully Targets a Matter under State Jurisdiction

7. The FPA is clear. The states, not the Commission, are the entities responsible for shaping the generation mix. Although the FPA vests the Commission with jurisdiction over wholesale sales of electricity as well as practices affecting those wholesale sales,[4] Congress expressly precluded the Commission from regulating "facilities used for the generation of electric energy."[5] Instead, Congress gave the states exclusive jurisdiction to regulate generation facilitates.[6]

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[4] Specifically, the FPA applies to "any rate, charge, or classification, demanded, observed, charged, or collected by any public utility for any transmission or sale subject to the jurisdiction of the Commission" and "any rule, regulation, practice, or contract affecting such rate, charge, or classification." 16 U.S.C. § 824e(a) (2018); *see also id.* § 824d(a) (similar).

[5] *See id.* § 824(b)(1) (2018); *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1292 (2016) (describing the jurisdictional divide set forth in the FPA); *FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 767 (2016) (*EPSA*) (explaining that "the [FPA] also limits FERC's regulatory reach, and thereby maintains a zone of exclusive state jurisdiction"); *Panhandle E. Pipe Line Co. v. Pub. Serv. Comm'n of Ind.*, 332 U.S. 507, 517–18 (1947) (recognizing that the analogous provisions of the NGA were "drawn with meticulous regard for the continued exercise of state power"). Although these cases deal with the question of preemption, which is, of course, different from the question of whether a rate is just and reasonable under the FPA, the Supreme Court's discussion of the respective roles of the Commission and the states remains instructive when it comes to evaluating how the application of a MOPR squares with the Commission's role under the FPA.

[6] 16 U.S.C. § 824(b)(1); *Hughes*, 136 S. Ct. at 1292; *see also Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 205 (1983) (recognizing that issues including the "[n]eed for new power facilities, their economic feasibility, and rates and services, are areas that have been characteristically governed by

8. But while those jurisdictional lines are clearly drawn, the spheres of jurisdiction themselves are not "hermetically sealed."[7] One sovereign's exercise of its authority will inevitably affect matters subject to the other sovereign's exclusive jurisdiction.[8] For example, any state regulation that increases or decreases the number of generation facilities will, through the law of supply and demand, inevitably affect wholesale rates.[9] But the existence of such cross-jurisdictional effects is not necessarily a "problem" for the purposes of the FPA. Rather, those cross-jurisdictional effects are the product of the "congressionally designed interplay between state and federal regulation"[10] and the natural result of a system in which regulatory authority is divided between federal and

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the States").

[7] *EPSA*, 136 S. Ct. at 776; *see Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1601 (2015) (explaining that the natural gas sector does not adhere to a "Platonic ideal" of the "clear division between areas of state and federal authority" that undergirds both the FPA and the Natural Gas Act).

[8] *See EPSA*, 136 S. Ct. at 776; *Oneok*, 135 S. Ct. at 1601; *Coal. for Competitive Elec. v. Zibelman*, 906 F.3d 41, 57 (2d Cir. 2018) (explaining that the Commission "uses auctions to set wholesale prices and to promote efficiency with the background assumption that the FPA establishes a dual regulatory system between the states and federal government and that the states engage in public policies that affect the wholesale markets").

[9] *Zibelman*, 906 F.3d at 57 (explaining how a state's regulation of generation facilities can have an "incidental effect" on the wholesale rate through the basic principles of supply and demand); *id.* at 53 ("It would be 'strange indeed' to hold that Congress intended to allow the states to regulate production, but only if doing so did not affect interstate rates." (quoting *Nw. Cent. Pipeline Corp. v. State Corp. Comm'n of Kansas*, 489 U.S. 493, 512-13 (1989) (*Northwest Central*))); *Elec. Power Supply Ass'n v. Star*, 904 F.3d 518, 524 (7th Cir. 2018) (explaining that the subsidy at issue in that proceeding "can influence the auction price only indirectly, by keeping active a generation facility that otherwise might close . . . . A larger supply of electricity means a lower market-clearing price, holding demand constant. But because states retain authority over power generation, a state policy that affects price only by increasing the quantity of power available for sale is not preempted by federal law.").

[10] *Hughes*, 136 S. Ct. at 1300 (Sotomayor, J., concurring) (quoting *Northwest Central*, 489 U.S. at 518); *id.* ("recogniz[ing] the importance of protecting the States' ability to contribute, within their regulatory domain, to the Federal Power Act's goal of ensuring a sustainable supply of efficient and price-effective energy").

state government.[11] Maintaining that interplay and permitting each sovereign to carry out its designated role is essential to the dual-federalist structure that Congress made the foundation of FPA.

9. In recent years, the Supreme Court has repeatedly admonished both the Commission and the states that the FPA does not permit actions that "aim at" or "target" the other sovereign's exclusive jurisdiction.[12] Beginning with *Oneok*, the Court has underscored that its "precedents emphasize the importance of considering the *target* at which the state law *aims*."[13] The Court has subsequently explained how that general principle plays out in practice when analyzing the limits on both federal and state authority. In *EPSA*, the Court held that the Commission can regulate a practice affecting wholesale rates, provided that the practice "directly" affected wholesale rates and that the Commission does not regulate or target a matter reserved for exclusive state jurisdiction.[14] And in *Hughes*, the Court again emphasized that a state may not aim at or target the Commission's jurisdiction, which means that a state cannot not "tether" its policy design to participation in the Commission-jurisdictional wholesale market.[15] In the intervening few years, the lower federal courts have carefully followed the Court's strict prohibition on one sovereign regulating in a manner that aims at or targets the other jurisdiction.[16]

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[11] *Cf. Star*, 904 F.3d at 523 ("For decades the Supreme Court has attempted to confine both the Commission and the states to their proper roles, while acknowledging that each use of authorized power necessarily affects tasks that have been assigned elsewhere.").

[12] *Hughes*, 136 S. Ct. at 1298 (relying on *Oneok*, 135 S. Ct. at 1599, for the proposition that a state may regulate within its sphere of jurisdiction even if its actions "incidentally affect areas within FERC's domain" but that a state may not target or intrude on FERC's exclusive jurisdiction); *EPSA*, 136 S. Ct. at 776 (emphasizing the importance of "'the *target* at which [a] law *aims*'") (quoting *Oneok*, 135 S. Ct. at 1600); *Oneok*, 135 S. Ct. at 1600 (recognizing "the distinction between 'measures *aimed directly at* interstate purchasers and wholesales for resale, and those aimed at' subjects left to the States to regulate") quoting *N. Nat. Gas Co. v. State Corp. Comm'n of Kan.*, 372 U.S. 84, 94 (1963) (*Northern Natural*))).

[13] *Oneok*, 135 S. Ct. at 1600 (discussing *Northern Natural*, 372 U.S. at 94, and *Northwest Central*, 489 U.S. at 513-14).

[14] *EPSA*, 136 S. Ct. at 775-77; *id.* at 776.

[15] *Hughes*, 136 S. Ct. at 1298, 1299.

[16] *See, e.g.*, *Zibelman*, 906 F.3d at 50-51, 53; *Star*, 904 F.3d at 523-24; *Allco Fin.*

10. The Commission's use of the MOPR in this proceeding violates that principle. By its own terms, the Commission's "target" or "aim" is the PJM states' exercise of their exclusive jurisdiction to regulate generation facilities. At every turn, the Commission has focused on the purported problems caused by the states' decisions to promote particular types of generation resources. For example, the Commission began its determination section in the June 2018 Order by noting that "[t]he records [before it] demonstrate that states have provided or required meaningful out-of-market support to resources in the current PJM capacity market, and that such support is projected to increase substantially in the future."[17] The Commission noted that state efforts to shape the resource mix are increasing and are projected to increase at an even faster rate going forward.[18] The Commission explained that these state actions created "significant uncertainty" and left resources unable to "predict whether their capital will be competing against" subsidized or unsubsidized units.[19] And the Commission ultimately found that PJM's tariff was unjust and unreasonable because of the potential for subsidized resources to participate in and affect the capacity market clearing price[20]—in other words, the natural consequence of any state regulation of generation facilities.[21]

11. Today's order is even more direct in its attack on state resource decisionmaking. It begins by reiterating the finding that an expanded MOPR is necessary in light of increasing state action to shape the generation mix, "especially out-of-market state support for renewable and nuclear resources."[22] It then asserts that PJM's existing, limited MOPR is unjust and unreasonable because it does not specifically prevent state actions from keeping existing resources operational or facilitating the entry of new

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Ltd. v. Klee, 861 F.3d 82, 98 (2d Cir. 2017).

[17] June 2018 Order, 163 FERC ¶ 61,236 at P 149.

[18] *Id.* PP 151-152. Similarly, in explaining its decision to extend the MOPR to existing resources, the Commission relied, not on evidence about how state action *might* affect clearing prices, but entirely on the fact that state actions were proliferating and that, as a result, resources that it believes ought to consider retiring might not do so. *Id.* P 153.

[19] *Id.* P 150.

[20] *Id.* P 156.

[21] *See supra* note 9 and accompanying text.

[22] *Calpine Corp. v. PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,239, at P 37 (2019) (Order).

resources through the capacity market.[23] To address those concerns, the Commission adopts a sweeping MOPR that could potentially apply to any conceivable state effort to shape the generation mix. And, tellingly, it rejects the suggestion that the MOPR should apply only to those state policies that actually affect the wholesale rate.[24]

12. In fact, the Commission comes right out and acknowledges that its goal is to "send price signals on which investors and consumers can rely to guide the orderly entry and exit of economically efficient capacity resources."[25] That means the Commission is attempting to establish a set of price signals for determining resource entry and exit that will supersede state resource decisionmaking and better reflect the Commission's policy priorities. It is hard to imagine how the Commission could much more directly target or aim at state authority over resource decisionmaking. Although the Commission insists that it is not impinging on state authority, it concedes elsewhere in today's order that the MOPR disregards and nullifies the policies to which it applies.[26] And, as if that were not enough, the Commission compounds its intrusion on state authority by substituting its own policy preferences—a peculiar mix of reverence for "competition" and reliance on administrative pricing—to entrench the existing resource mix and trample states' concerns about the environmental externalities of electricity generation.

13. All told, this simply is not a proceeding where "the Commission's justifications for regulating . . . are all about, and only about, improving the wholesale market."[27]

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[23] *Id.* P 37.

[24] Order, 169 FERC ¶ 61,239 at PP 56, 65-75. Imposing a requirement that there be an actual price impact would have brought today's order far closer to the facts in *EPSA*. *See* 136 S. Ct. at 771-72 (explaining that the demand response rule was structured to compensate only those resources whose participation would "result in actual savings to wholesale purchasers"); *id.* at 776 (noting the entities "footing the bill [for demand response participation] are the same wholesale purchasers that have benefited from the lower wholesale price demand response participation has produced (italics omitted)). Such a requirement would not be especially unusual. Markets throughout the country apply conduct and impact thresholds for mitigation, including in energy, ancillary services, and capacity markets.

[25] Order, 169 FERC ¶ 61,239 at P 40.

[26] The Commission justifies its refusal to extend the MOPR to federal subsidies because to do so would "disregard or nullify the effect of federal legislation." Order, 169 FERC ¶ 61,239 at P 87. But that can only mean that the Commission is fully aware that this is what it is doing to state policies, notwithstanding its repeated assurances that it respects state jurisdiction over generation facilities. *See, e.g.*, *id.* n.345.

[27] *EPSA*, 136 S. Ct. at 776 (citing *Oneok*, 135 S. Ct. at 1599).

Unlike the rule upheld in *EPSA*, where the matters subject to state jurisdiction "figure[d] no more in the Rule's goals than in the mechanism through which the Rule operates," the state actions are front and center in the Commission's justification for acting.[28] To be sure, the Commission doffs its hat to "price suppression" throughout the order. But repeating the phrase "price suppression" does not change the fact that the Commission's stated concern in both the June 2018 Order and today's order is the states' exercise of their authority to shape the generation mix or that the Commission's stated goal for the Replacement Rate is to displace the effects of state resource decisionmaking. Similarly, the Commission's observation that it is not literally precluding states from building new resources is beside the point. That's the equivalent of saying that a grounded kid is not being punished because he can still play in his room—it deliberately mischaracterizes both the intent and the effect of the action in question.

14. The MOPR's recent evolution illustrates the extent of the shift in the Commission's focus from the wholesale market to state resource decisionmaking. The MOPR was originally used to mitigate buyer-side market power within the wholesale market[29]—a concern at the heart of the Commission's responsibility to ensure that wholesale rates are just and unreasonable.[30] And for much of the MOPR's history, that is what it did. Even when the Commission eliminated the categorical exemption for resources developed pursuant to state public policy, the Commission limited the MOPR's application only to natural gas-fired resources—*i.e.*, those that would most likely be used as part of an effort to decrease capacity market prices.[31]

[28] *Id.*

[29] Specifically, those early MOPRs were designed to ensure that net buyers of capacity were not able to deploy market power to drive down the capacity market price. *See generally* Richard B. Miller, Neil H. Butterklee & Margaret Comes, *"Buyer-Side" Mitigation in Organized Capacity Markets: Time for a Change?*, 33 Energy L.J. 459 (2012) (discussing the history buyer-side mitigation at the Commission).

[30] *Cf., e.g., Pub. Util. Dist. No. 1 of Snohomish Cty. v. Dynegy Power Mktg., Inc.*, 384 F.3d 756, 760 (9th Cir. 2004) (explaining that the absence of market power could provide a strong indicator that rates are just and reasonable); *Tejas Power Corp. v. FERC*, 908 F.2d 998, 1004 (D.C. Cir. 1990) ("In a competitive market, where neither buyer nor seller has significant market power, it is rational to assume that the terms of their voluntary exchange are reasonable, and specifically to infer that the price is close to marginal cost, such that the seller makes only a normal return on its investment.").

[31] *See New Jersey Board of Public Utilities v. FERC*, 744 F.3d 74, 106-07 (3d Cir. 2014) (*NJBPU*).

15. It was only last year that state resource decisionmaking became the MOPR's primary target. For the first time, the Commission asserted that the MOPR could be used to block state resource decisionmaking writ large rather than only those state policies that could rationally be aimed at exercising market power in order to depress prices. The Commission has never been able to justify its change of target. It first claimed that this transformation of the MOPR was necessary to ensure "investor confidence" and the ability of unsubsidized resources to compete against resources receiving state support.[32] A few months later, at the outset of this proceeding, the Commission abandoned "investor confidence" altogether and asserted the need to mitigate state policies in order to protect the "integrity" of the capacity market—another concept that it did not bother to explain.[33] And today, the Commission adds yet another new twist: That state subsidies "reject the premise the capacity markets."[34] But, as with investor confidence and market integrity, it is hard to know exactly what that premise is.

16. If there is one thing that those inscrutable principles share, it is their inability to conceal, much less justify, the fundamental shift in the Commission's focus. Whereas the MOPR once targeted efforts to exercise market power on behalf of load and directly reduce the capacity market price, it now targets state resource decisionmaking, and particularly state efforts to address the externalities of electricity generation. That change is one of kind and not just degree. And because that shift in focus is wholly impermissible, the Commission has little choice but to hide behind excuses such as investor confidence, market integrity, and the premise of capacity markets—principles that, as applied here, are so abstract as to be meaningless. The Commission's effort to recast the MOPR as always having been about price suppression at some level of generality[35] obfuscates that point and badly mischaracterizes the recent shift in the MOPR's focus.[36]

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[32] *ISO New England Inc.*, 162 FERC ¶ 61,205, at P 21 (2018).

[33] June 2018 Order, 163 FERC ¶ 61,236 at PP 150, 156, 161.

[34] Order, 169 FERC ¶ 61,239 at P 17.

[35] *Id.* at P 136. Saying that the MOPR has always been about price suppression is the equivalent of saying that speed limits have always been about keeping people from getting to their destination too quickly. There is a sense in which that is true, but it kind of misses the real goal.

[36] The majority points to the U.S. Court of Appeals for the Third Circuit's decision in *NJBPU*, 744 F.3d 74, to argue that at least one court has already blessed extending the MOPR to state-sponsored resources. *See* Order, 169 FERC ¶ 61,239 at P 7. But *NJBPU* differs in important respects. First, at that time, the MOPR was still limited to natural gas-fired generators—the resources that could feasibly and rationally be built for the

17. The consequences of the Commission's theory of jurisdiction reinforce the extent to which it intrudes on state authority. Taken seriously, today's order permits the Commission to zero out *any* state effort to address the externalities associated with sales of electricity. That includes the Regional Greenhouse Gas Initiative (RGGI) a market-based program to reduce greenhouse gas emissions. It would also target any future carbon tax, cap-and-trade program, or clean energy standard—all of which would inevitably affect the wholesale market clearing price. That result is untenable. A theory of jurisdiction that allows the Commission to block any state effort to economically regulate the externalities associated with electricity generation is not a reasonable interpretation of the FPA's balance between federal and state jurisdiction.[37]

II. Today's Order Does Not Establish a Just and Reasonable Rate

A. Under the Commission's Definition, Almost All Capacity in PJM Is a Subsidized Resource

18. Taking today's order at face value, much—and perhaps the vast majority—of the capacity in PJM will potentially be subject to the MOPR. That is because the Commission's broad definition of subsidy encompasses almost any aspect of state resource decisionmaking. Although the Commission's various exemptions and carve-outs will blunt some of the resulting impact, the definition of subsidy will nevertheless apply to a vast swathe of resources and create enormous uncertainty, even for those resources that eventually manage to escape mitigation. Moreover, as explained in the following sections,[38] resources that do not escape mitigation will no longer be competing based on their offers to supply capacity, but rather based on a complex system of administrative pricing whose entire purpose is to increase capacity prices.

19. It all starts with the Commission's definition of subsidy. A State Subsidy is

> A direct or indirect payment, concession, rebate, subsidy, non-bypassable consumer charge, or other financial benefit that is (1) a

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purpose of depressing capacity market prices, *see* 744 F.3d at 106. In addition, as the court explained, the Commission's "enumerated reasons for approving the elimination of the state-mandated exception relate directly to the wholesale price for capacity." *Id.* at 98. As noted, however, the Commission's recent application of the MOPR, including in this proceeding, focuses much more broadly on the supposed problems with state subsidies.

[37] *Cf. EPSA*, 136 S. Ct. at 774 (explaining that the FPA cannot be interpreted in a manner that allows it to "assum[e] near infinite breadth").

[38] *Supra* Section II.C.

> result of any action, mandated process, or sponsored process of a state government, a political subdivision or agency of a state, or an electric cooperative formed pursuant to state law, and that (2) is derived from or connected to the procurement of (a) electricity or electric generation capacity sold at wholesale in interstate commerce, or (b) an attribute of the generation process for electricity or electric generation capacity sold at wholesale in interstate commerce, or (3) will support the construction, development, or operation of a new or existing capacity resource, or (4) could have the effect of allowing a resource to clear in any PJM capacity auction.[39]

20. Let's begin with the biggest categories of capacity resources newly subject to the MOPR: Resources relied upon by vertically integrated utilities and public power (including municipal utilities and electric cooperatives). Vertically integrated utilities and public power represent nearly a fifth of the capacity in PJM.[40] All these entities recover their costs through non-bypassable consumer charges that are the result of "a process of a state government, a political subdivision or agency of a state, or an electric cooperative formed pursuant to state law."[41]

21. In addition, as I noted in my dissent from the underlying order, the PJM states provide dozens of different subsidies and benefits tied to particular generation resources or generation types.[42] Those ubiquitous subsidies expose a vast number of resources to potential mitigation. For example, Kentucky exempts companies that use coal to generate electricity (its principal source of electricity[43]) from paying property taxes,[44] while other states provide tax breaks for the fuel types that play an important role in their

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[39] Order, 169 FERC ¶ 61,239 at P 65.

[40] Monitoring Analytics, *2019 State of the Market Report for PJM: January through September* at Tbl. 5-5, *available at* https://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2019/2019q3-som-pjm-sec5.pdf.

[41] Order, 169 FERC ¶ 61,239 at P 65.

[42] June 2018 Order, 163 FERC ¶ 61,236 (Glick, Comm'r, dissenting at 8).

[43] Clean Energy Advocates Protect, Docket No. ER18-1314-000 (2018) App. E (Doug Koplow, *Energy Subsidies within PJM: A Review of Key Issues in Light of Capacity Repricing and MOPR-Ex Proposals*).

[44] *Id.*

local economies.[45] All of those programs qualify as subsidies as they are "derived from or connected to the procurement" of electricity or capacity or "could have the effect of allowing a resource to clear in any PJM capacity auction."[46]

22. But those are just some of the obvious State Subsidies. The Commission's definition will also ensnare a variety of state actions that have little in common with any ordinary use of the word "subsidy." For example, any resource that benefits from a state carbon tax, cap-and-trade program, or clean energy standard would be subject to mitigation because, as a result of state action, it receives financial benefit (whether direct or indirect) that is connected to electricity generation or an attribute of the generating process. Putting aside the affront to state jurisdiction, consider the mess that would create. Every relatively clean resource would "benefit" from a carbon tax or cap-and-trade system by virtue of becoming more cost-competitive. That benefit would not be limited to zero-emissions resources. Instead, taking the Commission's definition at face value, every relatively efficient natural gas-fired resource—including existing ones—would be subject to mitigation because they are relatively less carbon-intensive.

23. That is not an abstract concern. A literal application of the subsidy definition includes RGGI because it provides a financial benefit as a result of state action or state-mandated process. This means that every relatively low-emitting generator in Delaware and Maryland[47] will be subject to mitigation. And the same fate may shortly befall relatively clean generators in Virginia, Pennsylvania, and New Jersey—all of which are considering or have announced their intention to join RGGI in the near future.

24. In addition, the PJM states have a host of idiosyncratic regulatory regimes that may well trigger the MOPR. Case-in-point: The New Jersey Basic Generation Service Electricity Supply Auction (BGS auction). Through this state-mandated process, electric distribution companies solicit offers from resources to serve their load. The plain language of the Commission's definition of subsidy would treat any resource that serves load through the BGS auction as subsidized and, therefore, subject to the MOPR. That means that PJM and its Market Monitor will need to look behind the results of every BGS auction to determine which resources are receiving a benefit from this state process, which covers nearly 8,000 MW of load.[48] That could easily mean that the majority of

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[45] *Id.*

[46] Order, 169 FERC ¶ 61,239 at P 65.

[47] Both of which are RGGI members. *The Regional Greenhouse Gas Initiative*, https://www.rggi.org/rggi-inc/contact (last visited Dec. 19, 2019) (listing RGGI member states).

[48] This is the total peak load from the tranches in the 2019 BGS auction. *The 2019 BGS Auctions*, http://www.bgs-auction.com/documents/ 2019_BGS_Auction_Results.pdf

resources that serve load in New Jersey will now be subject to mitigation. As this example illustrates, even state processes that are open, fair, transparent, and fuel-neutral may be treated as state subsidies, irrespective of the underlying state goals.

25. Perhaps the Commission will find a way to wiggle out from under its own definition of subsidy in ruling on PJM's compliance filing or over the course of what will no doubt be years of section 205 filings, section 206 complaints, and requests for declaratory orders addressing the definition of subsidy. But even under the best case scenario, where the Commission provides PJM and its stakeholders with quick and well-reasoned guidance on the meaning of "State Subsidy" (and, based on the Commission's performance to date in this proceeding, I would not get my hopes up), it will likely be years before we have a concrete understanding of how the subsidy definition works in practice or resources know for sure whether they will be subject to mitigation.

B. The Replacement Rate Is Arbitrary and Capricious

26. Although the subsidy definition is broad, it nevertheless contains a number of arbitrary and capricious distinctions exemptions, and classifications. My point is not that the Commission should further expand the MOPR or apply it more stringently. As should by now be clear, I would altogether get out of the business of mitigating public policies. My point here is that the Commission's arbitrary application of the MOPR only underscores the extent to which it is poor public policy and not the product of reasoned decisionmaking.

1. The Commission's Exclusion of Federal Subsidies Is Arbitrary and Capricious

27. No single determination in today's order is more arbitrary than the Commission's exclusion of all federal subsidies. Federal subsidies have pervaded the energy sector for more than a century, beginning even before the FPA declared that the "business of transmitting and selling electric energy . . . is affected with a public interest."[49] Since 1916, federal taxpayers have supported domestic exploration, drilling, and production activities for our nation's fossil fuel industry.[50] And since 1950, the federal government has provided roughly a trillion dollars in energy subsidies, of which 65 percent has gone

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(last visited Dec. 19, 2019).

[49] 16 U.S.C. § 824 (2018).

[50] *See* Molly Sherlock, Cong. Research Serv., *Energy Tax Policy: Historical Perspectives on and Current Status of Energy Tax Expenditures* 2-3 (May 2011), *available at* https://fas.org/sgp/crs/misc/R41227.pdf (Energy Tax Policy).

to fossil fuel technologies.[51] These policies have "artificially" reduced the price of natural gas, oil, and coal, which in turn has allowed resources that burn these fuels—including many of the so-called "competitive" resources that stand to benefit from today's order—to submit "uncompetitive" bids into PJM's markets for capacity, energy, and ancillary services. By lowering the marginal cost of fossil fuel-fired units, government policies have allowed these units to operate more frequently and have encouraged the development of more of these units than might otherwise have been built.

28. Federal subsidies remain pervasive in PJM. The federal tax credit for nonconventional natural gas,[52] contributed to the spike in new natural gas-fired power plants between 2000 and 2005,[53] by decreasing the cost of operating those plants. Similarly, subsidies such as the percentage depletion allowance and the ability to expense intangible drilling costs have shaved billions of dollars off the cost of extracting coal and natural gas—two of the principal sources of electricity in PJM.[54] In addition, the domestic nuclear power industry would not exist without the Price-Anderson Act, which

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[51] *See* Nancy Pfund and Ben Healey, DBL Investors, *What Would Jefferson Do? The Historical Role of Federal Subsidies in Shaping America's Energy Future*, (Sept. 2011), *available at* http://www.dblpartners.vc/wp-content/uploads/2012/09/What-Would-Jefferson-Do-2.4.pdf; *New analysis: Wind energy less than 3 percent of all federal incentives*, Into the Wind: The AWEA Blog (July 19, 2016), https://www.aweablog.org/14419-2/ (citing, among other things, Molly F. Sherlock and Jeffrey M. Stupak, *Energy Tax Incentives: Measuring Value Across Different Types of Energy Resources*, Cong. Research Serv. (Mar. 19, 2015), *available at* https://fas.org/sgp/crs/misc/R41953.pdf; The Joint Committee on Taxation, *Publications on Tax Expenditures*, https://www.jct.gov/publications.html?func=select&id=5 (last visited June 29, 2018)) (extending the DBL analysis through 2016).

[52] Energy Tax Policy at 2 n.3. That credit has lapsed. *Id.* at 18.

[53] *Natural gas generators make up the largest share of overall U.S. generation capacity*, Energy Info. Admin. (Dec. 18, 2017), https://www.eia.gov/todayinenergy/detail.php?id=34172.

[54] The Joint Committee on Taxation, *Estimates Of Federal Tax Expenditures For Fiscal Years 2018-2022* at 21-22 (2018); Monitoring Analytics, *Analysis of the 2021/2022 RPM Base Residual Auction: Revised* 95 (2018), *available at* https://www.monitoringanalytics.com/ reports/Reports/2018/ IMM_Analysis_ of_the_20212022_RPM_BRA_Revised _20180824.pdf (reporting that coal, natural gas, and nuclear collectively make up more than three-quarters of the generation mix in PJM); *see generally* Molly Sherlock, Cong. Research Serv., *Energy Tax Policy: Historical Perspectives on and Current Status of Energy Tax Expenditures* 2-6 (May 2011) (discussing the history of energy tax policy in the United States).

imposes indemnity limits for nuclear power generators, enabling them to secure financing and insurance at rates far below what would reflect their true cost.[55] Federal subsidies have also promoted the growth of renewable resources through, for example, the production tax credit (largely used by wind resources)[56] and the investment tax credit (largely used by solar resources).[57] These and other federal government interventions have had a far greater "suppressive" impact on the markets than the "state subsidies" targeted by today's order, especially when you consider that these resources make up the vast majority of the cleared capacity in PJM.[58]

29. The Commission, however, excludes all federal subsidies from the MOPR on the theory that it lacks the authority to "disregard or nullify the effect of federal legislation."[59] That justification is contradictory at best.[60] It is, of course, true that the FPA does not give the Commission the authority to undo other federal legislation. But the Commission's defense of the MOPR when applied to state policies, is that the MOPR neither disregards nor nullifies those policies, but instead addresses only the effects that those policies have on the PJM market.[61]

30. If, for the sake of argument, we accept the Commission's characterization of the MOPR's impact on state policies, then its justification for exempting federal subsidies from the MOPR immediately falls apart. Under that interpretation the MOPR does not actually disregard or nullify federal policy, but rather addresses only the effects of state

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[55] 42 U.S.C. § 2210(c).

[56] U.S. Department of Energy, 2018 Wind Technologies Market Report. Page 70. (accessed Dec 18. 2019) http://eta-publications.lbl.gov/sites/default/files/wtmr_final_for_posting_8-9-19.pdf.

[57] Solar Energy Industries Assoc., *History of the 30% Solar Investment Tax Credit* 3-4 (2012) https://www.seia.org/sites/default/files/resources/History%20of%20ITC%20Slides.pdf.

[58] Monitoring Analytics, *Analysis of the 2021/2022 RPM Base Residual Auction: Revised* 95 (2018), *available at* https://www.monitoringanalytics.com/reports/Reports/2018/IMM_Analysis_of_the_20212022_RPM_BRA_Revised_20180824.pdf (reporting that coal, natural gas, and nuclear collectively make up more than three-quarters of the generation mix in PJM).

[59] Order, 169 FERC ¶ 61,239 at P 87.

[60] *Cf.* EPSA Initial Testimony at 16-19; IPP Coalition Initial Testimony at 11.

[61] Order, 169 FERC ¶ 61,239 at PP 7, 40.

policy on federal markets in order to address the concern that resources will "submit offers into the PJM capacity market that do not reflect their actual costs."[62] "But the Commission cannot have it both ways."[63] If the MOPR disregards or nullifies federal policy, it must have the same effect on state policy. And if it does not nullify or disregard state policy, then the Commission has no reasoned justification for exempting federal subsidies from the MOPR.

31. The Commission cites to a number of cases for well-established canons of statutory interpretation, such as that the general cannot control the specific and that federal statutes must, when possible, be read harmoniously.[64] But those general canons provide no response to my concerns. The problem is that the Commission gives the MOPR one characterization in order to stamp out state policies and a different one in order to exempt federal policies. And if we assume that its characterization about the effect of the MOPR on state policies is accurate, then no number of interpretive canons can cure the Commission's arbitrary refusal to apply the MOPR to federal policies.

2. The Commission's Disparate Offer Floors Discriminate Against New Resources

32. In addition, the differing offer floors applied to new and existing resources are arbitrary and capricious. Today's order requires new resources receiving a State Subsidy to be mitigated to Net Cost of New Entry (Net CONE) while existing resources receiving a State Subsidy are mitigated to their Net Avoidable Cost Rate (Net ACR). The Commission suggests that this distinction is appropriate because new and existing resources do not face the same costs.[65] In particular, the Commission asserts that setting the offer floor for new resources at Net ACR would be inappropriate because that figure "does not account for the cost of constructing a new resource."[66]

33. That distinction does not hold water. As the Independent Market Monitor explained in his comments, it is illogical to distinguish between new and existing resources when defining what is (or is not) a competitive offer.[67] That is because, as a

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[62] June 2018 Order, 163 FERC ¶ 61,236 at P 153.

[63] *Atlanta Gas Light Co. v. FERC*, 756 F.2d 191, 198 (D.C. Cir. 1985); *California ex rel. Harris v. FERC*, 784 F.3d 1267, 1274 (9th Cir. 2015) (same).

[64] Order, 169 FERC ¶ 61,239 n.177.

[65] *Id.* P 138.

[66] *Id*.

[67] Independent Market Monitor Brief at 16 ("A competitive offer is a competitive

result of how most resources are financed, a resource's costs will not materially differ based on whether it is new or existing (*i.e.*, one that has cleared a capacity auction). That means that there is no basis to apply a different formula for establishing a competitive offer floor based solely on whether a resource has cleared a capacity auction. To the extent it is appropriate to consider the cost of construction for a new resource it is just as appropriate to consider the cost of construction for one that has already cleared a capacity auction. That is consistent with Net CONE, which calculates the nominal 20-year levelized cost of a resource minus its expected revenue from energy and ancillary services. Because that number is *levelized*, it does not change between a resource's first year of operation and its second.

34. However, as the Independent Market Monitor explains, Net CONE does not reflect how resources actually participate in the market.[68] Instead of bidding their levelized cost, both new and existing competitive resources bid their marginal capacity—*i.e.*, their net out-of-pocket costs, which Net ACR is supposed to reflect. Perhaps reasonable minds can differ on the question of which offer floor formula is the best choice to apply. But there is nothing in this record suggesting that it is appropriate to use different formulae based on whether the resource has already cleared a capacity auction.

35. It may be true that setting the offer floor at Net ACR for new resources will make it more likely that a subsidized resource will clear the capacity market, MOPR notwithstanding. Holding all else equal, the higher the offer floor, the less likely that a subsidized resources will clear, so a higher offer floor will more effectively block state policies. But that is not a reasoned explanation for the differing offer floors applied to new and existing resources.

3. <u>The Commission Gives No Consideration to the Order's Impact on Existing Business Models</u>

36. In its rush to block the impacts of state policies, the Commission ignores the consequences its actions will have on well-established business models. In particular, today's order threatens the viability, as currently constituted, of (1) aggregated demand response providers; (2) public power; and (3) resources financed in part through sales of voluntary renewable energy credits.

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offer, regardless of whether the resource is new or existing."); *id*. at 15-16 ("It is not an acceptable or reasonable market design to have two different definitions of a competitive offer in the same market. It is critical that the definitions be the same, regardless of the reason for application, in order to keep price signals accurate and incentives consistent.").

[68] *Id.*

a. Demand Response

37. The Commission has long recognized that the end-use demand resources that are aggregated by a Curtailment Service Providers (CSP)—*i.e.*, a demand response aggregator—may not be identified years in advance of the delivery year.[69] The PJM market rules have permitted CSPs to participate in the Base Residual Auction without identifying all end-use demand resources.[70] That allowance is fundamental to the aggregated demand response business model, since, without it, short-lead time resources might never be able to participate in the Base Residual Auction. Today's order upends that allowance, extending the MOPR to any end-use demand resource that receives a State Subsidy. In practice, that means that a CSP will have to know all of its end-use demand resources prior to the Base Residual Auction (three years prior to the delivery year). Further complicating matters, today's order grandfathers existing demand response without indicating whether the grandfathering right attaches to the CSP or the end-use demand resources.

38. The potential damage to the CSP business model is especially puzzling because PJM indicated that the default offer floor for at least certain demand response resources should be at or near zero,[71] suggesting that even if they receive a subsidy, that subsidy would not reduce their offer below what this Commission deems a competitive offer. Demand response has provided tremendous benefits to PJM, both terms of improved

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[69] For example, recognizing that demand response is a "short-lead-time" resource, the Commission previously directed PJM to revise the allocation of the short-term resource procurement target so that short-lead resources have a reasonable opportunity to be procured in the final incremental auction. *PJM Interconnection L.L.C.*, 126 FERC ¶ 61,275 (2009). The Commission subsequently removed the short-term resource procurement target only after concluding that doing so would not "unduly impede the ability of Demand Resources to participate in PJM's capacity market." *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208, at PP 394, 397 (2015).

[70] Under PJM's current market rules, CSPs must submit a Demand Resource Sell Offer Plan (DR Sell Offer Plan) to PJM no later than 15 business days prior to the relevant RPM Auction. This DR Sell Offer Plan provides information that supports the CSP's intended DR Sell Offers and demonstrates that the DR being offered is reasonably expected to be physically delivered through Demand Resource Registrations for the relevant delivery year. *See* PJM Manual 18: PJM Capacity Market – Attachment C: Demand Resource Sell Offer Plan.

[71] PJM explains that, beyond the initial costs associated with developing a customer contract and installing any required hardware or software, that it could not identify any avoidable costs that would be incurred by an existing Demand Resource that would result in a MOPR Floor Offer Price of greater than zero. PJM Initial Brief at 47.

market efficiency and increased reliability.[72] I see no reason to risk giving up those gains based on an unsubstantiated concern about state policies.

b. Public Power

39. The public power model predates the capacity market by several decades and is premised on securing a reliable supply of power for each utility's citizen-owners at a reasonable and stable cost, which often includes an element of long-term supply.[73] Today's order declares the entire public power model to be an impermissible state subsidy.[74] That is a stark departure from past precedent, which recognized that "the purpose and function of the MOPR is not to unreasonably impede the efforts of resources choosing to procure or build capacity under longstanding business models."[75]

40. It is also a fundamental threat to the long-term viability of the public power model. Although today's order exempts existing public power resources from the MOPR, it provides that all new public power development will be subject to mitigation. That means that public power's selection and development of new capacity resources will now be dependent on the capacity market outcomes, not the self-supply model on which it has traditionally relied. That fundamentally upends the public power model because it limits the ability of public power entities to choose how to develop and procure resources over a long time horizon.

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[72] In a 2019 report, Commission staff explained that demand response resources comprised 6.7 percent of peak demand in PJM and that PJM called on load management resources in October of 2019 to reduce consumption during a period of grid stress. *See* Federal Energy Regulatory Commission, *2019 Assessment of Demand Response and Advanced Metering* 17, 20 (2019), *available at* https://www.ferc.gov/legal/staff-reports/2019/DR-AM-Report2019.pdf. PJM has previously explained that the more that demand actively participates in the electricity markets, the more competitive and robust the market results. Also, if visible and dependable, demand response has proven to be a valuable tool for maintaining reliability both in terms of real-time grid stability and long-term resource adequacy. PJM Interconnection, *Demand Response Strategy* 1 (2017), *available at* https://www.pjm.com/~/media/library/reports-notices/demand-response/20170628-pjm-demand-response-strategy.ashx.

[73] American Municipal Power and Public Power Association of New Jersey Initial Brief at 14-15; American Public Power Association Initial Brief at 15.

[74] Order, 169 FERC ¶ 61,239 at P 65.

[75] *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331 (2006).

c. Voluntary Renewable Energy Credits

41. Today's order will also upend the business model of resources that sell renewable energy credits to businesses or individuals that purchase them voluntarily —*e.g.*, in order to meet corporate sustainability goals—rather to comply with a state mandate. Voluntary renewable energy credits have been an important driver behind the deployment of new renewable resources.[76] Although the Commission recognizes that a voluntary renewable energy credit is not a state subsidy, it nevertheless subjects resources that will generate them to the MOPR.[77] The Commission justifies that choice on the basis that a capacity resource cannot definitively know three years in advance how the credits it generates will ultimately be retired and by whom.[78] But that means that today's order is "mitigating the impact of *consumer preferences* on wholesale electricity markets"[79] just because they may potentially overlap with state policies.

42. But it is not at all clear why such an all-or-nothing rule is necessary. For example, the Commission could carry over the attestation approach it uses for the Competitive Entry Exemption[80] and allow a resource to submit an attestation stating that it will sell voluntary renewable energy credits to resources that are not subject to a state renewable portfolio standard with a contractual rider requiring immediate retirement to prevent any secondary transaction to an entity that may use it to meet its regulatory obligations. Moreover, PJM could presumably play an instrumental verification role since it administers the Generation Attribute Tracking System, the trading platform for renewable energy credits in PJM.[81] All told, the Commission's treatment of voluntary renewable energy credits creates an unnecessary threat to a valuable means of supporting clean energy.

C. The Commission's Replacement Rate Does Not Result in a Competitive Market

43. By this point, the central irony in today's order should be clear. The Commission began this phase of the proceeding by decrying government efforts to shape the

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[76] *See* Advanced Energy Buyers Group Reply Brief at 2.

[77] Order, 169 FERC ¶ 61,239 at P 174.

[78] *Id.*

[79] Clean Energy Industries Initial Testimony at 6.

[80] Order, 169 FERC ¶ 61,239 at P 159.

[81] See *Id.* n. 314.

generation mix because they interfere with "competitive" forces.[82] Today, the Commission is solving that "problem" by creating a byzantine administrative pricing scheme that bears all the hallmarks of cost-of-service regulation, without any of the benefits. That is a truly bizarre way of fostering the market-based competition that my colleagues claim to value so highly.

44. As noted, the Commission's definition of subsidy will encompass vast swathes of the PJM capacity market, including new investments by vertically integrated utilities and public power, merchant resources that receive any one of the litany of subsidies available to particular resources or generation types, and almost any resource that benefits from a state effort to directly address the environmental externalities of electricity generation.[83] Moreover, the Commission's inaptly named Unit-Specific Exemption[84]—its principal response to concerns about over mitigation—is simply another form of administrative pricing. All the Unit-Specific Exemption provides is an escape from the relevant default offer floor. Resources are still required to bid above an administratively determined level, not at the level that they would otherwise participate in the market. And even resources that might appear eligible for the Competitive Entry Exemption may hesitant to take that option given the Commission's proposal to permanently ban from the capacity market any resource that invokes that exception and later finds itself subsidized.[85] Are those resources really going to wager their ability to participate in the capacity market on the proposition that their state will never institute a carbon tax, pass or join a cap-and-trade program, or create any other program that the Commission might deem an illicit financial benefit?

45. To implement this scheme, PJM and the Independent Market Monitor will need to become the new subsidy police, regularly reviewing the laws and regulations of 13 different states and D.C.—not to mention hundreds of localities and municipalities—in search of any provision or program that could conceivably fall within the Commission's definition of State Subsidy. "But that way lies madness."[86] Identifying the potential

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[82] June 2018 Order, 163 FERC ¶ 61,236 at P 1.

[83] *See Supra* Section II.A.

[84] In today's order, the Commission renames what is currently the "Unit Specific *Exception*" in PJM's tariff to be a Unit Specific *Exemption*. But, regardless of name, it does not free resources from mitigation because they are still subject to an administrative floor, just a lower one. An administrative offer floor, even if based on the resource's actual costs does not protect against over-mitigation and certainly is not market competition.

[85] Order, 169 FERC ¶ 61,239 at P 160.

[86] David Roberts, *Trump's crude bailout of dirty power plants failed, but a subtler*

subsidies is just the start. Given the consequences of being subsidized, today's order will likely unleash a torrent of litigation over what constitutes a subsidy and which resources are or are not subsidized. Next, PJM will have to develop default offer floors for all relevant resource types, including many that have never been subject to mitigation in PJM or anywhere else—*e.g.*, demand response resources or resources whose primary function is not generating electricity. Moreover, given the emphasis that the Commission puts on the Unit-Specific Exemption as the solution to concerns about over-mitigation, we can expect that resources will attempt to show that their costs fall below the default offer floor, with many resorting to litigation should they fail to do so. The result of all this may be full employment for energy lawyers, but it has hardly the most obvious way to harness the forces of competition to benefit consumers, which, after all, is the whole reason these markets were set up in the first place.

46. Although this administrative pricing regime is likely to be as complex and cumbersome as cost-of-service regulation, it provides none of the benefits that a cost-of-service regime can provide. Most notably, the administrative pricing regime is a one-way ratchet that will only increase the capacity market clearing price. Unlike cost-of-service regulation, there is no mechanism for ensuring that bids reflect true costs. Nor does this pricing regime provide any of the market-power protections provided by a cost-of-service model. Once mitigated, resources are required to offer no *lower* than their administratively determined offer floor, but there is no similar prohibition on offering above that floor.[87]

D. <u>Today's Order Is a Transparent Attempt to Slow the Transition to a Clean Energy Future</u>

47. Today's order serves one overarching purpose: To slow the transition to a clean energy future. Customers throughout PJM, not to mention several of the PJM states, are increasingly demanding that their electricity come from clean resources. Today's order represents a major obstacle to those goals. Although even this Commission won't come out and say that, the cumulative effect of the various determinations in today's order is unmistakable. It helps to rehash in one place what today's order achieves.

48. First, after establishing a broad definition of subsidy, the Commission creates several categorical exemptions that overwhelmingly benefit existing resources. Indeed,

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bailout is underway (Mar. 23, 2018), https://www.vox.com/energy-and-environment/2018/3/23/17146028/ferc-coal-natural-gas-bailout-mopr.

[87] Moreover, as discussed further below, *see infra* notes 100-102 and accompanying text, PJM's capacity market is structurally uncompetitive and lacks any meaningful market mitigation. There is every reason to believe that today's order will exacerbate the potential for the exercise of market power.

the exemptions for (1) renewable resources, (2) self-supply, and (3) demand response, energy efficiency, and capacity storage resources are all limited to existing resources.[88] That means that all those resources will never be subjected to the MOPR and can continue to bid into the market at whatever level they choose. In addition, new natural gas resources, remain subject to the MOPR and are not eligible to qualify for the Competitive Entry Exemption while existing natural gas resources are eligible.[89]

49. Second, as noted in the previous section, the Commission creates different offer floors for existing and new resources.[90] Using Net CONE for new resources and Net ACR for existing resources will systematically make it more likely that existing resources of all types can remain in the market, even if they have higher costs than new resources that might otherwise replace them. As the Independent Market Monitor put it, this disparate treatment of new and existing resources "constitute[s] a noncompetitive barrier to entry and . . . create[s] a noncompetitive bias in favor of existing resources and against new resources of all types, including new renewables and new gas fired combined cycles."[91]

50. Third, the mitigation scheme imposed by today's order will likely cause a large and systematic increase in the cost of capacity—at least 2.4 billion dollars per year.[92]

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[88] Order, 169 FERC ¶ 61,239 at PP 171, 200, 206.

[89] *Id.* PP 2, 41.

[90] *See supra* Section II.B.2.

[91] Internal Market Monitor Reply Brief at 4.

[92] Our estimate of the cost impact of today's order is a "back-of-the-envelope" calculation. I assume that all previously-cleared nuclear power plants that receive zero-emissions credits in Illinois and New Jersey (totaling 6,670 MW) are unlikely to clear the next auction. I also assume there would be a 25 percent reduction of the demand response resources that previously cleared the Base Residual Auction. *See supra* Section III.B.3.a. Together, these resources total 9,340 MW of capacity. I relied on PJM's finding that "[a]dding less than 2% of zero-priced supply to the area outside MAAC, for example, reduces clearing prices in the RTO by 10%" which provides some insight to the slope of the demand curve and the associated price sensitivity. See PJM Transmittal Letter, Docket No. ER18-1314-000, at 28 (2018). Applying this slope to the last capacity auction clearing price of $140/MW-day and removing 9,300 MW, assuming all else remains constant, the capacity clearing price could increase $40/MW-day resulting in a cost of $2.4 billion. *See* PJM Interconnection, *2021/2022 RPM Base Residual Auction Results,* https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2021-2022/2021-2022-base-residual-auction-report.ashx (last visited Dec. 19, 2019).

Although that will appear as a rate increase for consumers, it will be a windfall to existing resources that clear the capacity market. That windfall will make it more likely that any particular resource will stay in the market, even if there is another resource that could supply the same capacity at far less cost to consumers.

51. And finally, today's order dismisses, without any real discussion, the June 2018 Order's fig leaf to state authority: The resources-specific FRR Alternative.[93] That potential path for accommodation was what allowed the Commission to profess that it was not attempting to block or (to use the language from today's order) nullify state public policies.[94] And, although implementing that option (or any of the alternative proposals for a bifurcated capacity market currently before us) would no doubt have been a daunting task, doing so at least had the potential to establish a sustainable market design by allowing state policies to have their intended effect on the resource mix. And that is why it is no longer on the table. It could have provided a path for states to continue shaping the energy transition—exactly what this new construct is designed to stop.

52. The Commission proposes various justifications for each of these changes, some of which are more satisfying than others. But don't lose the forest for the trees. At every meaningful decision point in today's order, the Commission has elected the path that will make it more difficult for states to shape the future resource mix. Nor should that be any great surprise. Throughout this proceeding, the Commission has directly targeted states' exercise of their authority over generation facilities, treating state authority as a problem that must be remedied by a heavy federal hand. The only thing that is new in today's order is the extent to which the Commission is willing to go. Whereas the June 2018 Order at least paid lip service to the importance of accommodating state policies,[95] today's order is devoid of any comparable sentiment.

53. The pattern in today's order will surely repeat itself in the months to come. The Commission puts almost no flesh on the bones of its subsidy definition and provides precious little guidance how its mitigation scheme will work in practice. Accordingly, most of the hard work will come in the compliance proceedings, not to mention the litany of section 205 filings, section 206 complaints, and petitions for a declaratory order seeking to address fact patterns that the Commission, by its own admission, has not yet bothered to contemplate. In each of those proceedings, the smart money should be on the Commission adopting what it will claim to be facially neutral positions that, collectively, entrench the current resource mix. Although the proceedings to come will inevitably

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[93] June 2018 Order, 163 FERC ¶ 61,236 at P 157.

[94] *See supra* Section II.A.

[95] June 2018 Order, 163 FERC ¶ 61,236 at P 161.

garner less attention than today's order, they will be the path by which the "quiet undoing" of state policies progresses.[96]

E. Today's Order Makes No Effort to Consider the Staggering Cost that the Commission Is Imposing on Ratepayers

54. Today's order will likely cost consumers 2.4 billion dollars per year initially, even under conservative assumptions.[97] The Commission, however, does not even pretend to consider those costs when establishing the Replacement Rate. It is hard for me to imagine a more careless agency action than one that foists a multi-billion-dollar rate hike on customers without even considering, much less justifying, that financial burden.

55. And those costs will continue to grow with each passing year. Although today's order aims to hamper state efforts to shape the generation mix, it will not snuff them out entirely. In other words, there simply is no reason to believe that the Commission will succeed in realizing its "idealized vision of markets free from the influence of public policies."[98] As former Chairman Norman Bay aptly put it, "such a world does not exist, and it is impossible to mitigate our way to its creation."[99] But that means that, as a resource adequacy construct, the PJM capacity market will increasingly operate in an alternate reality, ignoring more and more capacity just because it receives some form of state support. It also means that customers will increasingly be forced to pay twice for capacity or, in different terms, to buy ever more unneeded capacity with each passing year. I cannot fathom how the costs imposed by a resource adequacy regime that is premised on ignoring actual capacity can ever be just and reasonable.

56. And those are just the first-order consequences of today's order. The record before us provides every reason to believe that this approach will lead to many other cost increases. For example, the Commission's application of the MOPR will exacerbate the potential for the exercise of market power in what PJM's Independent Market Monitor describes as a structurally uncompetitive market.[100] As the Institute for Policy Integrity

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[96] Danny Cullenward & Shelley Welton, *The Quiet Undoing: How Regional Electricity Market Reforms Threaten State Clean Energy Goals*, 36 Yale J. on Reg. Bull. 106, 108 (2019), *available at* https://www.yalejreg.com/bulletin/the-quiet-undoing-how-regional-electricity-market-reforms-threaten-state-clean-energy-goals/.

[97] *See supra* note 92.

[98] *N.Y. State Pub. Serv. Comm'n*, 158 FERC ¶ 61,137 (2017) (Bay, Chairman, concurring).

[99] *Id.*

[100] "The capacity market is unlikely to ever approach a competitive market

explained, expanding the MOPR will decrease the competitiveness of the market, both by reducing the number of resources offering below the MOPR price floor and changing the opportunity cost of withholding capacity.[101] With more suppliers subject to administratively determined price floors, resources that escape the MOPR—or resources with a relatively low offer floor—can more confidentially increase their bids up to that level, secure in the knowledge that they will still out-bid the mitigated offers. That problem is compounded by PJM's weak seller-side market power mitigation rules, which include a safe harbor for mitigation up to a market seller offer cap that has generally been well above the market-clearing price.[102]

57. Given those potential rate increases, one might think that the Commission would be at pains to evaluate the costs caused by today's order and to explain why and how the purported benefits of the Replacement Rate justify those costs. Instead, the Commission does not discuss the potential cost increases, much less justify them, even as it assures us that the Replacement Rate is just and reasonable. For an agency whose primary purpose is to protect consumers to so completely ignore the costs of its decision is both deeply disappointing and a total abdication of the responsibilities Congress gave us when it created this Commission.[103]

F. <u>PJM and Its Stakeholders Deserve Better</u>

58. We have been down this road before. In the June 2018 Order, the Commission up ended the PJM capacity market, finding it unjust and unreasonable and providing PJM only vague guidance on how to remedy its concerns and nowhere near enough time to

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structure in the absence of a substantial and unlikely structural change that results in much greater diversity of ownership. Market power is and will remain endemic to the structure of the PJM Capacity Market. . . . Reliance on the RPM design for competitive outcomes means reliance on the market power mitigation rules." Monitoring Analytics, *Analysis of the 2021/2022 RPM Base Residual Auction: Revised* (2018).

[101] Institute for Policy Integrity Initial Brief at 14-16.

[102] For example, the RTO-wide market seller offer cap for the 2018 Base Residual Auction $237.56 per MW/day while the clearing price for the RTO-wide zone was $140.00 per MW/day. *See* PJM Interconnection, *2021/2022 RPM Base Residual Auction Results*, https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2021-2022/2021-2022-base-residual-auction-report.ashx (last visited Dec. 19, 2019).

[103] *See, e.g.*, *California ex rel. Lockyer v. FERC*, 383 F.3d 1006, 1017 (9th Cir. 2004); *City of Chicago, Ill. v. FPC*, 458 F.2d 731, 751 (D.C. Cir. 1971) ("[T]he primary purpose of the Natural Gas Act is to protect consumers." (citing, *inter alia*, *City of Detroit v. FPC*, 230 F.2d 810, 815 (1955)).

develop a thoughtful solution. That profound act of "regulatory hubris"[104] led to the last year-and-a-half of indecision and undermined, perhaps fatally, a construct that is supposed to provide predictably and clear signals.

59. Today's order is much of the same. The Commission is embarking on a quixotic effort to mitigate the effects of any attempt to exercise the authority that Congress reserved to the states when it enacted the FPA. In so doing, the Commission has dropped even the pretense of accommodating states' exercise of that reserved authority.[105] Instead, the Commission appears dead set on refashioning the PJM capacity market from a construct based primarily on bids determined by the resources themselves to a construct that will inevitably rely on a pervasive program of administrative pricing. It is hard to overestimate the scope or the impact of the changes required by today's order. Given all that, you would think that the Commission would have learned its lesson from the June 2018 Order and provided PJM and its stakeholders detailed directives and plenty of time to work out the nuances associated with putting those directives into practices.

60. Instead, the Commission provides only a general definition of what constitutes a subsidy and gives PJM only 90 days to develop and file sweeping changes to the market. That is a patently unreasonable period of time in which to accomplish all that the Commission has put on PJM's plate. For example, to implement the definition of State Subsidy in today's order, PJM will have to develop a process to routinely review the regulatory structure of all thirteen PJM states and D.C. to identify every potential benefit available under any state or local law.[106] Moreover, the Commission is requiring PJM to produce new zonal default Net CONE and net ACR values for all resource types, many of which have dissimilar cost structures and have never been the subject of this sort of analysis in the past. To properly set a default offer floors and establish a fair and transparent process for conducting unit-specific reviews, PJM needs time to work with its Independent Market Monitor and its stakeholders. Not allowing PJM and its stakeholders to have that time will surely lead to unintended consequences, including, potentially, another round of the delays that have plagued this proceeding ever since the Commission issued the June 2018 Order.

61. Frankly put, the Commission has bungled this process from the start and today's order provides little reason for optimism. I have sympathy for anyone (or any state) that is losing confidence in the Commission's ability to responsibly manage resource adequacy, especially in the age of climate change as more and more states contemplate

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[104] June 2018 Order, 163 FERC ¶ 61,236 (LaFleur, Comm'r, dissenting at 5).

[105] *Id.* P 161.

[106] Recall that the Commission rejects PJM's proposal to include a *de minimus* exception in the subsidy definition. Order, 169 FERC ¶ 61,239 at P 96.

the type of clean energy programs to which the current Commission is so obviously opposed. I fear that the most likely outcome of today's order is that more PJM states will contemplate ways to reduce their exposure to the Commission's hubris, including abandoning the PJM capacity market and potentially exiting PJM altogether. Should that come to pass, the Commission will have no one to blame but itself.

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62. One final point. I fully recognize that the PJM states are doing far more to shape the generation mix than they were when the original settlement established the PJM Reliability Pricing Model in 2006.[107] It may well be that a mandatory capacity market is no longer a sensible approach to resource adequacy at a time when states are increasingly exercising their authority under the FPA to shape the generation mix. Indeed, the conclusion that I draw from the record in front of us is not that there is an urgent need to mitigate the effects of state public policies, but rather that we should be taking a hard look at whether a mandatory capacity market remains a just and reasonable resource adequacy construct in today's rapidly evolving electricity sector. It is a shame that we have not spent the last two years addressing *that* question instead of how best to stymie state public policies.

For these reasons, I respectfully dissent.

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Richard Glick
Commissioner

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[107] *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331 (2006).

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