UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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PJM Interconnection, L.L.C.	)	**Docket No. ER13-535-000**
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PROTEST, ANSWER AND MOTION FOR
REJECTION OF THE NRG COMPANIES

Pursuant to Rules 211, 212 and 213 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (the "Commission"),[1] the NRG Companies[2] respectfully request that the Commission reject PJM Interconnection, L.L.C.'s ("PJM") motion to "simply accept" PJM's 2012 tariff filing ("2012 Tariff Filing"). PJM would have the Commission implement changes to the Minimum Offer Price Rule ("MOPR") that the Commission rejected in 2013 as not just and reasonable ("PJM Motion").[3] Such action is procedurally improper and guts critical market protections that are necessary to fulfill the Commission's statutory mandate under the Federal Power Act to maintain just and reasonable rates.

I. INTRODUCTION

PJM asserts that the failure of MOPR to put a price floor on even a single megawatt over the last "fourteen auctions"[4] is evidence that the Commission should simply allow the 2012

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[1] 18 C.F.R. §§ 385.211, .212, .213.

[2] For purposes of this filing, the NRG Companies are NRG Power Marketing LLC and GenOn Energy Management, LLC.

[3] *Motion of PJM Interconnection, L.L.C. for Order on Remand*, Docket No. ER13-535-000 (filed October 27, 2017).

[4] PJM includes five base residual auctions and nine incremental auctions in calculating its fourteen auctions. PJM Motion at 7-8.

Tariff Filing to become permanent. NRG sees something very different: clear evidence that PJM's proposed MOPR is toothless and does nothing to prevent uneconomic entry. New entrants are making an already over-supplied market even more over-supplied – and are being totally exempted from any review to ensure that their low bids are economically justified. The result is plain to see: new generation is flooding in to an already oversupplied market driving out existing resources at an alarming rate.

As detailed in the attached affidavit of Mr. Robert Stoddard, an expert in the field of market design who helped to fashion the initial MOPR, the use of the categorical MOPR exemptions over the last five years has "undermined the proper functioning of PJM's capacity market, allowing for more new generation into the market than is needed, suppressing capacity prices below long-run equilibrium levels, hastening retirement of useful existing plants and adding billions to the cost to serve load."[5]

PJM suggests that the Commission can "simply accept PJM's original section 205 proposal, unchanged, as just and reasonable."[6] But the Commission should not be lured in by the alleged "simplicity" of what PJM proposes. Instead, the Commission is obligated to follow the plain dictates of the Federal Power Act and reject the PJM Motion:

First, PJM is legally incorrect that the Commission may simply reinstate PJM's 2012 Tariff Filing. That proceeding was closed when the Commission found the filed rate to be unjust and unreasonable and the D.C. Circuit vacated the portion of the order imposing a different rate.[7] PJM cannot now shortcut the requirements of the Federal Power Act and avoid re-filing its rate

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[5] Stoddard Affidavit at P2.

[6] PJM Motion at 2.

[7] The D.C. Circuit vacated the Commission's Orders "with respect to unit-specific review, the competitive entry exemption, the self-supply exemption, and the mitigation period." *NRG Power Marketing, LLC v. FERC*, 862 F.3d 108, 117 (D.C. Cir. 2017)("*NRG PML*").

proposal properly under Section 205.

Second, the Court's vacatur of the Commission's order requires that the effective tariff is the tariff that was in effect prior to PJM's 2012 Tariff Filing – which we refer to as the "Preexisting Tariff." The Preexisting Tariff is now correctly on file, and ensures that new entrants demonstrate that they are actually economic by allowing the Independent Market Monitor to review each unit's actual costs and revenue assumptions. The Commission should reject PJM's interpretation regarding the effects of a remand and instead follow decades of precedent that requires reversion back to the last clear rate.

Finally, NRG is not suggesting that the Commission direct PJM to re-run the market or retroactively impose price floors on units that previously cleared. Instead, the Commission has broad authority to craft remedies and should use that discretion to apply the Preexisting Tariff and the unit-specific review process on a prospective basis only. The Commission is not under any obligation to require PJM to retroactively revise its capacity market results for the last five years. Instead, the proper procedural outcome is for the Commission to waive any non-compliance over the last five years to provide the market the certainty it needs, and then apply the Preexisting Tariff in a prospective manner only (or until PJM properly replaces that rate correctly).

II. BACKGROUND

A. 2012 Tariff Filing

Because generators may bid below their actual costs in capacity auctions, strong market protections have always been a crucial element to well-functioning capacity auctions.[8] To prevent the harms of below-cost bidding, PJM implemented the MOPR, which requires generators to bid in capacity auctions at or above a certain price floor set by PJM. PJM had a

[8] *See NRG PML*, 862 F.3d at 111 (*citing PJM Interconnection, L.L.C.*, 137 FERC ¶ 61,145 at 25 (2011)).

unit-specific review exemption from the MOPR under which a new generator had the opportunity to undergo a "unit-specific review" of its costs and if it could demonstrate that its actual costs were below the price floor set by PJM, the generator could bid into the auction below the price floor. Due to concerns with the implementation of the unit-specific review process and a lack of transparency with the process, PJM undertook a comprehensive stakeholder process.

That stakeholder process culminated in the 2012 Tariff Filing under which PJM proposed to eliminate the unit-specific MOPR review process and replace it with a new three-part rate: a "self-supply" exemption, a "competitive entry" exemption, and a rule that any new generation not exempted under the categorical exemptions would be required to bid into three consecutive auctions at or above the MOPR price floor.[9]

Under the self-supply exemption, all "cooperative and municipal utilities, including public power supply entities . . . and joint action agencies," vertically integrated utilities and single-customer load-serving entities are exempt from MOPR, provided that any associated resources do not enter into arrangements to secure project funds from sources or in manners prohibited by the Tariff. Additionally, to qualify for the exemption, a self-supply resource must meet certain thresholds to illustrate that they are not either significantly net short or net long on capacity.

Under the competitive entry exemption, a market seller that does not receive out of market payments from a government entity connected to the construction or clearing in a PJM capacity auction may demonstrate the resource qualifies through submission of appropriate documentation and certification. Alternatively, a market seller that is receiving such payments can qualify for the exemption if PJM determines that the state procurement process from which

[9] *PJM Interconnection, L.L.C.,* Docket No. ER13-535 (December 7, 2012).

the payments are received qualifies as "Competitive and Non-Discriminatory" under the Tariff. Market sellers qualifying for the merchant exemption receive a blanket exemption from MOPR and there is no floor price above which they are required to offer into the auction.

Under the third element of the three part proposal, PJM proposed to impose MOPR mitigation on new resources that bid into the capacity auction and did not receive a categorical exemption for three years. In other words, a new resource that did not qualify for an exemption was required to bid at or above the MOPR floor offer price until it cleared capacity auctions for three consecutive delivery years before being able to bid below the MOPR floor.

B. The 2013 FERC Order

In its May 2, 2013 "Order Conditionally Accepting in Part, and Rejecting in Part, Proposed Tariff Provisions, Subject to Conditions," the Commission found that PJM's proposed changes were not just and reasonable standing alone, and accepted the filing subject to the condition that PJM retain the unit-specific review process ("Commission Order").[10] The Commission went on to find that while "PJM's proposed reliance on categorical exemptions is just and reasonable, subject to conditions, because there may be resources that have lower competitive costs than the default offer floor, and these resources should have the opportunity to demonstrate their competitive entry costs."[11] Therefore, the Commission found that the rate proposed by PJM was not just and reasonable and required that PJM maintain the unit-specific review process.

The Commission also rejected the three-year rule and found that resources should only have to bid at or above the MOPR price floor and clear for one year.[12]

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[10] *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 141 (2013).

[11] Commission Order at P 141.

[12] *Id.* at PP 210-212.

C. D.C. Circuit Order

Parties appealed the Commission Order to the D.C. Circuit, which found that the Commission exceeded its authority by transforming PJM's 2012 Tariff Filing into an "entirely new rate."[13] The Court applied the principles established in *City of Winnfield* and *Western Resources*, under which "Section 205 does not allow the Commission to suggest modifications that result in an 'entirely different rate design' than the utility's original proposal or the utility's prior rate scheme."[14] The Commission concluded that the Commission violated Section 205 by requiring modifications that resulted in "an entirely different rate design" than both PJM's 2012 Tariff Filing and PJM's prior rate scheme.[15] Specifically, the Court found that PJM wanted to replace its case-by-case approach for granting exemptions under unit-specific review with two narrower, categorical exemptions.[16] Instead, FERC's modifications expanded the exemptions by adding the two new exemptions on top of the unit-specific review.[17] Additionally, the Court found that the Commission's modifications further expanded the 2012 Tariff Filing by exempting certain generators from the price floor after one year instead of after three years as proposed by PJM.[18] Thus, the "entirely different rate design" that resulted from the Commission's modifications differed from both PJM's Tariff Filing and the rate design that was previously in effect in violation of the precedent set forth in *Western Resources* and *City of Winnfield.* As a result, the Court vacated the Commission's Orders "with respect to several aspects of PJM's proposed rate structure – the self-supply exemptions, the competitive entry

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[13] *NRG PML*, 862 F.3d at 110.

[14] *Id.* at 115.

[15] *Id.*

[16] *Id.*

[17] *Id.* at 116.

[18] *Id.* at 113.

exemption, unit-specific review, and the mitigation period" and remanded the case back to the Commission.[19]

D. PJM Motion

On October 23, 2017, PJM filed the Motion asking the Commission in light of the Court's remand, to "simply accept PJM's original section 205 proposal, unchanged, as just and reasonable."[20] In other words, PJM is asking the Commission to implement the self-supply and competitive entry exemptions and to eliminate the unit-specific review process. PJM suggests that such an approach, to revert to the 2012 Tariff Filing, is consistent with Commission precedent and the appropriate remedy in light of the fact that no parties used the unit-specific exemption in the last five years. Specifically, PJM argues that the Commission's "sole basis for finding [the competitive entry and self-supply exemptions] 'standing alone' not to be just and reasonable was the possibility that sellers that do not qualify for the exemptions might still have legitimate, justifiable offers below the MOPR price floor."[21] PJM argues that since the issuance of the Commission Order, PJM has conducted five Base Residual Auctions and the possibility of a potential market seller failing to qualify for the exemptions and needing to qualify under the unit-specific process has yet to materialize in the last five years.[22] Thus, on remand the Commission can conclude that the concern set forth in the Commission Order, that the unit-specific process be retained to ensure market sellers who do not qualify for the exemptions are afforded an opportunity to participate in the market was "overstated."[23]

PJM goes on to say that the choice of one-year versus three-year MOPR mitigation has

[19] *NRG PML*, 862 F.3d at 110, 117.

[20] PJM Motion at 2.

[21] *Id.* at 7.

[22] *Id.* at 2.

[23] *Id.* at 8.

had no practical impact on any of the auctions conducted since the Commission Order. PJM argues that the data of the last five years shows that the conditions that would have triggered the three-year rule did not occur. In the last five years there was no new generator that did not qualify for the categorical MOPR exemptions and then bid and cleared the auction.[24] Thus, PJM suggests that whether that generator only had to clear that one year or the next two is irrelevant.[25] As a result, PJM suggests that because there has been "little practical effect" from adopting a three-year rule instead of a one-year rule, the Commission could accept PJM's 2012 Filing.[26] On the other hand, PJM offers that because of the little impact of the rule, the Commission could just require the one-year rule as an alternative.

III. ANSWER AND PROTEST

A. The Effect of the D.C. Circuit's Decision is to Reinstate the Preexisting Tariff, Not the 2012 Tariff Filing.

1. PJM Misinterprets Commission Precedent in Suggesting that its 2012 Tariff Filing Governs.

PJM argues that the 2012 Tariff Filing is still pending before the Commission and that the Commission should simply accept it. The Commission's prior orders foreclose that course of action: The Commission rejected the 2012 Tariff Filing as "not just and reasonable as filed."[27] According to the Commission, the 2012 Tariff Filing "unreasonably narrowed the exemptions from the Minimum Offer Price Rule's price floor,"[28] which precluded the Commission from

[24] PJM Motion at 9.

[25] *Id.*

[26] *Id.* at 10.

[27] D.C. Cir. FERC Br. 20 (Case No. 15-1452); *id.* at 18 (describing its orders as finding that "the categorical exemptions were not just and reasonable without a unit-specific review process."); *PJM Interconnection LLC*, 143 FERC ¶ 61,090, P141 (May 2, 2013)(finding that "PJM's proposed changes are not just and reasonable standing alone . . .").

[28] *See NRG PML*, 862 F.3d at 113 (repeating the Commission's findings).

approving that proposal without modification.[29] The D.C. Circuit, moreover, never overturned the Commission's finding that the 2012 Tariff Filing was unjust and unreasonable. It instead faulted the Commission for crafting an "entirely new rate." Thus, because the D.C. Circuit never overturned the Commission's rejection of the package of MOPR exemptions set forth in the 2012 Tariff Filing, the Commission cannot accept the 2012 Tariff Filing without overruling its prior decisions rejecting PJM's filing.

PJM supports its assertion that the 2012 Tariff Filing should be effective with a recent Commission case, *ISO New England*,[30] that PJM suggests "recognized[] a federal court may vacate a Commission rate order, but doing so 'leave[s] in effect the rates filed under the Commission's authority pending the Commission's redetermination of a reasonable rate' on remand from the court."[31] But *ISO New England* does not support that at all. In *ISO New England*, the Commission found a rate unjust and unreasonable after multiple Section 206 complaints and established a new rate of return. The D.C. Circuit then vacated the going-forward rate of return. On remand, the Commission rejected the argument that the D.C. Circuit's decision had the effect of reinstating the rate that existed before the Section 206 complaints because a "court lacks authority to dictate the rate" on remand.[32] It did not say that a remand imposes a tariff where—as here—the Commission itself rejected it and that rejection is not reversed on appeal.

As a result, *ISO New England* provides PJM no support. The D.C. Circuit did not reject PJM's 2012 Tariff Filing – the Commission did! It thus is a Commission order – not a court order – that prevents PJM from treating its 2012 Tariff Filing as the current tariff. If anything,

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[29] *PJM Interconnection LLC*, 143 FERC ¶ 61,090, P141 (May 2, 2013).

[30] 161 FERC ¶ 61,031 (2017).

[31] PJM Motion at 5.

[32] *ISO New England*, 161 FERC ¶ 61,031, P27.

PJM's reading of *ISO New England* turns the decision on its head. The principle of *ISO New England* is that *courts* cannot dictate rates.[33] But PJM reads *ISO New England* to mean that the D.C. Circuit's decision effectively imposes the 2012 Tariff Filing that the Commission had rejected in a portion of its decision that was never overturned. That makes no sense. If PJM wants the Commission to accept its 2012 Tariff Filing, it must refile a proposal under Section 205 that addresses its defects. It cannot treat the D.C. Circuit's decision as imposing a tariff the Commission rejected it—particularly where the D.C. Circuit did not address the rationale for rejecting it and rejected only the Commission's modifications.

Imposing such an irrational extension of *ISO New England* would be particularly perilous given the fact that *ISO New England*'s discussion of the rate following remand was immaterial to the result that the Commission reached. In the *ISO New England* decision, the Commission set the rate of return for only the refund period and was going to determine the prospective rate at a later date.[34] In so doing, the Commission recognized that because refunds would be issued once the final rate was determined the parties would ultimately receive the same rate regardless what rate was established for the refund period.[35] The Commission noted that an immediate return to the rate in effect prior to the Commission order would, however, "significantly complicate the process of implementing the Commission's order on remand" – meaning it would make refunds more complicated.[36] The Commission emphasized that, whatever the tariff on remand, it would structure its remedy to ensure no one would be "harmed financially."[37] Such is not the case here, where existing generators are being actively harmed by market rules that allow new entrants to

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[33] *ISO New England*, 161 FERC ¶61,031, P27.

[34] *Id.* at 24.

[35] *Id.* at 24.

[36] *Id.* at 24.

[37] *Id.* at 24.

come into the market without any demonstration that they are financially justified, and where there is no Commission guarantee that existing generators will be made whole.

PJM also invokes *Burlington Northern Inc. v. United States,*[38] but such interpretation gets *Burlington Northern* exactly backwards. Central to the Supreme Court's reasoning in *Burlington Northern* was the fact that the D.C. Circuit had ordered the agency to adopt a rate that the agency had *properly* vacated.[39] The Court held that the D.C. Circuit had erred in doing so.[40] It is hard to see how that holding supports the result requested by PJM where they request the reinstatement of a rate that the Commission *properly* rejected.

In *Burlington Northern*, the Interstate Commerce Commission ("ICC") had adopted a particular rate (the *San Antonio I* rate) that would "continue in full force and effect until . . . further order of the Commission."[41] The ICC later vacated the *San Antonio I* rate, and replaced it with two new rates (the *San Antonio II* and *III* rates).[42] After the *San Antonio II* and *III* rates were vacated on appeal, the D.C. Circuit determined the *San Antonio I* rate had been "revived."[43] The Supreme Court held that, in ordering a specific rate "revived," the D.C. Circuit had intruded into the ICC's primary authority to pick the appropriate rate.[44] It rejected the argument that the *San Antonio I* rate was the only valid rate, explaining that the *San Antonio I* rate had been vacated by "order of the Commission" (in the *San Antonio II* order).[45] In other words, the D.C. Circuit erred by ordering the agency to adopt a rate that the agency had *properly*

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[38] 459 U.S. 131 (1982), *ISO New England*, 161 FERC ¶61,031, PP25-27.

[39] *See Burlington Northern Inc.,* 459 U.S. at 143.

[40] *See id.*

[41] *See id.* at 133.

[42] *Id.* at 134-35.

[43] *Id.* at 138.

[44] *Id.* at 142.

[45] *Id.* at 143.

vacated.[46] That decision, like *ISO New England*, precludes PJM from construing the D.C. Circuit's decision as imposing a tariff that the Commission rejected where the rejection was never overturned.

Burlington Northern also made clear that the D.C. Circuit can overturn a portion of an agency order while leaving other aspects of it untouched, unaffected, and still controlling. The Supreme Court observed that, in the case before it, the D.C. Circuit could have "minimized" any "interference with congressional objectives" by construing its own decision as overturning the ICC's "new rate calculations" in *San Antonio II* and *III*, but not as overturning the ICC's determination in those proceedings that the *San Antonio I* rate was "too low."[47] The D.C. Circuit's decision followed that pattern here. Its decision overturned the Commission Order because it required an "entirely different" rate.[48] But it did not overturn the Commission's ruling that the 2012 Proposed Tariff was unjust and unreasonable. The D.C. Circuit thus did precisely what *Burlington Northern* suggested: It rejected the unlawful new tariff, but left untouched the agency ruling that the 2012 Tariff Filing was fatally defective.

2. Implementing the Preexisting Tariff is Consistent with Further Commission Precedent.

Because the Commission's prior decisions preclude the adoption of PJM's 2012 Tariff Filing, the only possible solution is return to the "last clean rate" on file: the Preexisting Tariff, which sets forth the unit-specific review process. Before the Commission issued the Commission Order, the Preexisting Tariff was in effect. In the 2012 Tariff Filing, PJM sought to replace the Preexisting Tariff with the 2012 Tariff Filing, but the Commission rejected that

[46] *See Burlington Northern Inc.*, 459 U.S. at 143.

[47] *Id.* at 143 n.9.

[48] *See NRG PML*, 862 F.3d at 109.

proposal as unjust and unreasonable.[49] Accordingly, the Preexisting Tariff remained in effect. There is insufficient evidence "to make the necessary findings to replace the presumptively just and reasonable existing tariff language [the Preexisting Tariff] with alternative language, [thus] the existing language must remain in effect."[50] That logical result is consistent with D.C. Circuit and Commission precedent alike.

As PJM agrees, the effect of the D.C. Circuit's mandate is to place petitioners on remand in the "situation" they "would have been in" but for the Commission's unlawful action.[51] Thus, in the present case, they must be returned to where they would be absent the Commission's unlawful effort to impose an "entirely different rate design,"[52] And, as explained above, that prior position was the Preexisting Tariff: The 2012 Tariff Filing could not govern because it had been rejected. Indeed, it was never the governing tariff.

Reinstating the Preexisting Tariff is also consistent with how the Commission handled the primary D.C. Circuit precedent on which the *NRG* decision rests. In *Western Resources, Inc. v. FERC*,[53] the Commission accepted a forward-haul rate proposed by the utility but rejected the proposed backhaul rate.[54] Instead, it set the backhaul rate at half of the forward-haul rate.[55] The D.C. Circuit held that, by adopting "an entirely different rate design," the Commission had exceeded its authority under a provision of the Natural Gas Act identical to Section 205.[56] On

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[49] Commission Order at P 141.

[50] *See Columbia Gulf Trans. Co.*, 134 FERC ¶61,194, P 21 (2011).

[51] *Getty v. Fed. Sav. & Loan Ins. Corp.*, 805 F.2d 1050, 1061 (D.C. Cir. 1986); *see* PJM Motion 5.

[52] *NRG PML*, 862 F.3d at 116.

[53] 9 F.3d 1568 (D.C. Cir. 1993).

[54] *Id.* at 1571-72.

[55] *Id.* at 1577.

[56] *Id.* at 1578.

remand, the parties disputed which backhaul rate applied—the proposed rate or the prior rate.[57] The Commission determined that, because the proposed rate was "unjust and unreasonable, the pre-existing backhaul rate must remain in effect."[58] That same reasoning applies here.

B. The Commission Should Reject the Competitive Entry and Self-Supply Exemptions as Unjust and Unreasonable.

The precedent established in Section III.A above requires the Commission to review the proposed MOPR exemptions *de novo*.[59] PJM's Motion itself boasts that it has not applied a price floor to any unit "in the last 14 auctions," which counts base residual and incremental capacity auctions.[60] What PJM sees as a success story, the NRG Companies see as a fatal flaw to price formation in PJM. The PJM Motion illustrates the problems of the categorical MOPR exemptions. In order to have a meaningful MOPR that protects the market from artificially low prices, there simply cannot be categorical exemptions so broad that any new generator could drive a truck through them.

As Mr. Stoddard concludes, data from the last five capacity auctions held since the adoption of the two categorical MOPR exemptions demonstrates that, "these exemptions have swallowed the rule."[61] As Mr. Stoddard concludes after reviewing the data for the last five years, "it quickly becomes clear that effectively all new entry in PJM occurred under one

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[57] *Panhandle E. Pipe Line Co.*, 66 FERC ¶ 61,329, 62,071 (1994).

[58] *Id.*

[59] The NRG Companies have opposed the competitive entry and self-supply exemptions since their inception. There are multiple prior NRG Company pleadings in this docket, in which the NRG Companies express their significant concerns with the categorical exemptions. *See "NRG Companies Protest and Motion for Leave to File Out of Time"* (filed Dec. 28, 2012); "*NRG Companies Protest to PJM Interconnection, L.L.C.'s Deficiency Response*" (filed March 25, 2013); "*Request for Rehearing of the NRG Companies*" (filed June 3, 2013); "*Protest of the NRC Companies to PJM Interconnection L.L.C. Compliance Filing*" (filed June 24, 2013).

[60] PJM Motion at 7-8.

[61] Stoddard Affidavit at P4.

exemption or the other."[62] PJM explains that in the last five BRA auctions, no parties sought the unit-specific review because *every* party who wanted to bid below the MOPR price floor qualified for one of the two blanket exemptions. Jeffery Bastian in his affidavit states, "[a]ll sellers from resources covered by the MOPR that sought to submit an offer below the MOPR offer price floor have instead proceeded under the categorical exemptions."[63] This fact alone illustrates that the exemptions are entirely too broad. For the last five BRAs, the MWs qualifying for the categorical exemptions totaled over 10,000 MW:[64]

BRA	**Requested/Granted Exemption Quantity**	**Cleared Exemption Quantity**
2016/2017	13,253.1 MW	4,914.6 MW
2017/2018	14,029.8 MW	5,170.0 MW
2018/2019	13,530.5 MW	3,518.0 MW
2019/2020	12,992.2 MW	5,583.4 MW
2020/2021	12,161.0 MW	2,675.6 MW

[62] Stoddard Affidavit at P19.

[63] PJM Motion, Bastian Affidavit at P7.

[64] *See PJM Auction Result Reports. Available at:*

http://www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2020-2021-base-residual-auction-report.ashx

http://www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2019-2020-base-residual-auction-report.ashx

http://www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2018-2019-base-residual-auction-report.ashx

http://www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2017-2018-base-residual-auction-report.ashx

http://www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2016-2017-base-residual-auction-report.ashx

That is over 10,000 MW of new generation that could have potentially bid into each of the auctions at zero without any price review. After reviewing the data from the last five capacity auctions in which the categorical exemptions have been in place, Mr. Stoddard concludes that the MOPR "has been gutted such that virtually all offers enter the market without monitor review."[65] As illustrated by Mr. Stoddard, "[l]ooking across the five years since the new tariff has been in effect, exempted entry has accounted for 93 percent of all cleared incremental quantity (planned plus uprates) in the market."[66] Mr. Stoddard concludes that [t]his substantial new entry under the two exemptions has resulted in a substantial over-supply situation in PJM."[67]

The Commission must set rates for its regulated entities that are both just (compensatory) and reasonable (fair to the consumer).[68] In the capacity market context, this means that the Commission must establish rates, terms and conditions that provide capacity suppliers a "reasonable opportunity" to earn a just and reasonable rate of return on their capital invested to provide capacity reliability services to the PJM region.[69] The new entry that PJM has seen over the last five years is far more than that required for reliability.[70] This new entry is forcing down

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[65] Stoddard Affidavit at P24.

[66] *Id.* at P19.

[67] *Id.* at P5.

[68] *See Farmers Union Cent. Exchange, Inc. v. Federal Energy Regulatory Comm.* 734 F.2d 1486, 1502 (D.C. Circuit 1984) stating:

> When the inquiry is on whether the rate is reasonable to a producer, the underlying focus of concern is on the question of whether it is *high* enough to both maintain the producer's credit and attract capital. To do this, it must, *inter alia*, yield to equity owners a return "commensurate with returns on investments in other enterprises having corresponding risks," as well as cover the cost of debt and other expenses. . . . When the inquiry is whether a given rate is just and reasonable to the consumer, the underlying concern is whether it is *low* enough so that exploitation by the [regulated business] is prevented.

[69] *See Bridgeport Energy, LLC,* 113 FERC ¶ 61,311 at P29 (2005).

[70] Stoddard Affidavit at P5.

market prices and leading to premature retirement of existing units.[71] As Mr. Stoddard concludes, "it appears that the pricing of capacity has become unlinked from the underlying economics at the same time the new MOPR exemptions went into effect."[72] By permitting entire classes of new entrants to enter a market that is already oversupplied with capacity as price takers, without any form of mitigation – or even review – exacerbates the problem and runs afoul of the legal standard for the Commission to ensure just and reasonable rates for all market participants.

Moreover, reverting to the self-supply exemption in the 2012 Tariff Filing may lead to captive ratepayers being saddled with unnecessary costs. This is because the exempted resources may be uneconomic and may not have been built but, for being backed by ratepayer funds. The end result is that the 2012 Tariff Filing allows utilities to commit their captive ratepayers to paying for capacity at a cost that may be in excess of the actual market value of that capacity. At the same time, these potentially uneconomic ratepayer backed investments undermine investor confidence in companies, like NRG, that previously invested billions of dollars in the PJM market on a merchant basis.

1. The Commission Should Reject the Competitive Entry Exemption.

A planned resource owned by a merchant must not be permitted to crater capacity prices. To the contrary, the Federal Power Act charges this Commission with ensuring that rates are just and reasonable. The Commission overlooked this mandate in the Commission Order when it dismissed concerns about the potential impacts of the competitive entry exemption and concluded that the "purpose of the MOPR [ ] is not to protect a merchant resource from making a

[71] *Id.*

[72] *Id.* at P5.

poor investment decision with its own capital."[73] What the prior Commission ignored is that an individual generator making a poor investment decision has dire consequences for *existing* resources as well. To ensure just and reasonable rates the MOPR must protect the rest of the market from individual generators that make poor investment decisions. This Commission should consider whether allowing new resources to enter the market at less than their actual cost is a just and reasonable outcome.[74] The Commission to date has not done so in allowing the implementation of the categorical exemptions.

Mr. Stoddard shows that over the last five capacity auctions where the competitive entry exemption was in place, "developers were investing to bring new development projects forward even into a market that was six to nine thousand megawatts long."[75] Further, what Mr. Stoddard finds "even more surprising, though, is the large amount of merchant supply that *cleared.*" The fact that they cleared "tells us that merchant generators were offering their capacity below the clearing price in the auction, yet these prices (shown in Table RBS-1) were a small fraction of Net CONE."[76] The effect of continuing to allow merchant generation to bid new generation into the market without any cost review creates "cause for concern about the effect of prolonged market over-build on PJM's markets and capital infrastructure. Far more capacity investment is occurring than warranted by market fundamentals, and so the PJM markets are not achieving reliability at least cost."[77]

Permitting the implementation of the merchant exemption to the MOPR runs afoul of the Commission's obligation to ensure just and reasonable rates. The courts have long held that

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[73] Commission Order at P57.

[74] New resources entering the market may, in fact, be economic. However, they should be required to demonstrate that.

[75] Stoddard Affidavit at P18.

[76] *Id*.

[77] *Id.* at P21.

establishing just and reasonable rates involves a balancing of consumer and investor interests.[78] Merely relying on market forces is not sufficient, and that the Commission must still ensure that the market is returning rates that are within the zone of reasonableness.[79] While no particular outcome is compelled, there is little question that the impact of a new generator entering a fully-saturated market with very low prices is destructive to the long-term integrity of the capacity market, regardless of the underlying rationale of the sponsor.[80] The effect of a new uneconomic entrant that is not needed to meet resource adequacy needs, if allowed to clear, can have immediate and very disruptive impacts on the stable operation of both energy and capacity markets. Existing resources that rely solely on the energy and capacity markets to obtain the revenues they need for continued operations may not be able to ride out the shock wave caused by an uneconomic entrant. As. Mr. Stoddard notes the market has seen substantial retirements.[81]

2. The Commission Should Reject the Self-Supply Exemption.

The self-supply exemption is, if anything, even more deeply flawed. The exemption prevents the PJM capacity prices from reflecting the costs of new power plants proposed by public power entities. Dominion Power's New Brunswick facility is one example of a project that appears to have bid into the capacity market at less than its actual costs. Estimates are that this facility was going to cost over $1.2 billion to construct, excluding financing costs (or $934/kW, also excluding financing costs). Dominion's ratepayers are guaranteeing the costs of this new facility.[82] The facility began operating in April 2016. According to the PJM published

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[78] *See Federal Power Commission et al. v. Hope Natural Gas Co.,* 320 U.S. 591 (1944).

[79] *See Elizabethtown Gas Co. v. FERC*, 10 F.3d 866, 870-71 (D.C. Cir. 1993) (finding that market forces alone are not sufficient to assure just and reasonable rates and support the use of market-based rates).

[80] *See Exelon Corp. and Calpine Corp. v. ISO New England Inc.,* 154 FERC ¶ 61,005 at P 16 (2016).

[81] Stoddard Affidavit at 5.

[82] *See* Application, Direct Testimony, Exhibits and Schedules of Virginia Electric and Power Co., Before the State Corporation Commission of Virginia, Case No. PUE-2012-00128 at Volume 1, p. 9 (filed Nov.

MOPR price floors for the 2016/17 delivery year, "a new combined cycle generating facility in CONE Area 5 (Dominion) would require $198.06/MW-Day to warrant its entry into the market."[83] Thus, Dominion built its facility despite clearing prices equal to less than one-third of the price that PJM has determined would be needed to support such new entry. The fact that this project, which was and continues to be, entirely funded by Dominion's ratepayers, was apparently allowed into the PJM capacity auction to "compete" with merchant entities demonstrates the major flaw in allowing certain resources to bid into the auction without any price floor.

In its 2012 Tariff Filing, PJM tried to minimize the potential market suppression benefits of the self-supply exemption to qualified load serving entities by including maximum "Net Short" and "Net Long" thresholds. As Mr. Stoddard notes "there is no single public power entity large enough to fail the threshold tests."[84] In the Commission Order, in response to intervenors expressed concerns about the thresholds, the Commission found that the 2012 base residual auction data supported the then approved thresholds but "share[d] intervenors' concerns, however, that evolving market conditions could affect the accuracy and /or usefulness of these thresholds in the future."[85] In fact, Mr. Stoddard concludes that after reviewing five years of data "the thresholds have never been triggered, allowing thousands of megawatts of new supply

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2, 2012). Available at: https://www.dom.com/about/electric-transmission/brunswick/pdf/Volume1of5.pdf

[83] "Preliminary MOPR Floor Offer Prices for 2016/2017". February 12, 2013. http://pjm.com/~/media/markets-ops/rpm/rpm-auction-info/preliminary-mopr-floor-offer-prices-for-2016-2017.ashx

[84] Stoddard Affidavit at P14.

[85] Commission Order at P113. In its Compliance Filing in this docket, PJM proposed language to establish a periodic review of the thresholds, which commences June 1, 2020. *Compliance Filing, PJM Interconnection, L.L.C.,* ER13-535 (June 3, 2013). The Commission accepted the proposal. *Order on Rehearing and Compliance, PJM Interconnection, L.L.C.* 154 FERC ¶ 61,066 (October 15, 2015).

into the market without review by the market monitor."[86]

Continuously allowing a bucket of resources the opportunity to bid into a capacity auction at a level below a reasonable estimate of their actual cost, eviscerates any "reasonable opportunity" owners of existing generating facilities providing reliability service to PJM of earning a return on and of equity from the Commission-jurisdictional wholesale markets. As noted by Mr. Stoddard, while self-supply capacity seeking the categorical exemption over the last five capacity auctions "mostly dwindle[d] off . . . [t]here is a large addition of self-supplied resources that clears the market in 2019/20 [1,779 MW], however, defying this trend."[87] This uneconomic new entry dramatically distorts capacity prices and harms investors who previously invested in PJM capacity – including NRG and its investors and debt holders – and should be rejected.

C. The Commission Does Not Need to Rerun Prior Auctions and Can Waive None-Compliance With the Preexisting Tariff over the Past Five Years.

If the Commission orders that consistent with prior precedent, in light of the D.C. Circuit mandate, the Preexisting Tariff is in effect going forward, that does not mean any prior auctions—conducted under the invalidated tariff—must be redone. "FERC's discretion is 'at [its] zenith' " when it comes to "the fashioning of remedies."[88]

Here, that discretion strongly favors prospective application of the D.C. Circuit's decision, and weighs heavily against invalidating prior auctions. Where—as here—a tariff in a compliance filing is later overturned on appeal, the Commission's general policy is to remedy

[86] Stoddard Affidavit at P15.

[87] *Id.* at P13.

[88] *Laclede Gas Co. v. FERC*, 997 F.2d 936, 944 (D.C. Cir. 1993) (alteration in original); *cf. United Gas Imp. Co. v. Callery Prop., Inc.*, 382 U.S. 223, 228-29 (1965).

the "rate design *prospectively*."[89] The rationale for that policy applies with special force in cases like this one. PJM tariffs affect all market participants in PJM auctions. The Commission ordinarily seeks to avoid requiring market participants which did not themselves violate the Federal Power Act to provide refunds.[90] Here, invalidating auctions that took place long ago, and applying PJM's Preexisting Tariff to redo those past auctions, would put the Commission in the position of requiring parties who relied on the prior auctions, and violated no rules, to pay money to other participants.

Such a remedy, moreover, could undermine confidence in auction results.[91] Maintaining market confidence is particularly important here. The whole point of PJM's capacity auctions is "to ensure an adequate long-term supply of electricity" by encouraging generators to *build or retire* plants in response to price signals.[92] If auctions must be rerun years later, however, a generator that has cleared an auction might hesitate to invest hundreds of millions of dollars to build a new plant needed by the market for fear the auction will be conducted anew; or it might include an enormous risk premium in its bids to address that risk. The Commission thus has ample reason to use its discretion to fashion a prospective remedy to "protect the availability" of capacity; preserve "system reliability"; and "promot[e] the orderly development of plentiful supplies of electricity."[93] If the Commission orders that the Preexisting Tariff is in effect going forward, the Commission should waive refunds and any non-compliance over the last five years.

D. The Commission Should Act Expeditiously.

The NRG Companies recognize that the unit-specific review process set forth in the

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[89] *Ala. Power Co.*, 23 FERC ¶ 61,392, 61,833 (1983) (emphasis added).

[90] *Cf. San Diego Gas & Elec.*, 141 FERC ¶ 61,088, P 25 (2012) (declining to impose a market-wide remedy under § 206).

[91] *Cf. Alt. Power Source, Inc. v. ISO New Eng., Inc.*, 97 FERC ¶ 61,153, 61,671 (2001).

[92] *NRG PML*, 862 F.3d at 111; *see Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1293 (2016).

[93] *Consol. Edison Co. v. FERC*, 510 F.3d 333, 342 (D.C. Cir. 2007).

Preexisting Tariff is not without its flaws. These flaws (concerns with the implementation of the process and the surrounding lack of transparency) are well documented in this docket. However, as discussed herein, the unit-specific approach set forth in the Preexisting Tariff is the last effective tariff and the last approved just and reasonable rate. Consistent with prior Commission precedent the Preexisting Tariff should govern. However, if the Commission, based on the record on this docket, has concerns about the just and reasonableness of the unit-specific approach, the Commission should issue an order under Section 206 and require PJM to file a just and reasonable replacement, but require the Preexisting Tariff be placed into effect in the interim.

The May 2018 PJM capacity auction is quickly approaching. All market participants require certainty of the market rules prior to that auction. For that reason, the NRG Companies ask that the Commission act expeditiously in addressing PJM's Motion.

III. CONCLUSION

For the aforementioned reasons, the NRG Companies respectfully request that the Commission reject PJM's Motion and order PJM to put the Preexisting Tariff into effect.

November 14, 2017

Respectfully submitted,

/s/ Cortney Madea
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Certificate Of Service

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

Dated at Princeton, New Jersey this 14th day of November, 2017.

/s/ *Maria DeLuca*

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	Docket No. ER13-535-000

AFFIDAVIT OF ROBERT B. STODDARD
ON BEHALF OF THE NRG COMPANIES

I, Robert B. Stoddard, being duly sworn, depose and say:

I. QUALIFICATIONS

1. My name is Robert B. Stoddard. I am an economist and principal of Power Market Economics LLC at 28 Monument Square, Portland, Maine 04101. I am also the president and chief executive of GWave LLC, an ocean wave energy technology firm. As CEO of GWave, I provide executive leadership for a technology startup developing a new generation of ocean wave energy converters. Prior to joining GWave, I led the energy practice at Charles River Associates, a global consultancy, where I remain a senior consultant. My consulting work focuses on electricity industry restructuring, capital investment in power markets, and providing both strategic analyses and testimony for utilities, generation owners, and governments regarding the practical implications of market design. I have frequently testified to the Federal Energy Regulatory Commission ("the Commission") as well as to state utility commissions and legislatures on competitive market design, rates, and market power issues, particularly in the regions managed by the northeastern Regional Transmission Organizations. Related to this docket, I was closely involved in the original proceedings to implement the Reliability Pricing Model ("RPM") in PJM and helped to fashion the original Minimum Offer Price Rule ("MOPR"), and I have submitted affidavits on behalf of the NRG Companies when this docket was first before the Commission. I hold degrees in economics from Amherst College and Yale University. My complete *curriculum vita* is attached as Exhibit RBS-1.

II. PURPOSE AND BACKGROUND

2. I have been asked by the NRG Companies to respond to claims made by PJM in its Motion for Order on Remand regarding the functioning of the Minimum Offer Price Rule ("MOPR") since 2013. In summary, my review shows that the 2013 rule revision has undermined the proper functioning of PJM's capacity market, allowing far more new

generation into the market than is needed, suppressing capacity prices below long-run equilibrium levels, hastening retirement of useful existing plant, and adding billions to the cost to serve load. It appears that both merchant developers and self-supply entities are using the MOPR exemptions to offer planned generation at unsustainable and increasingly low prices, well below any plausible cost-based offer. Consumers are ultimately harmed by such "irrational exuberance" that leads developers to offer planned resources at arbitrarily low prices.

3. PJM's capacity market is an essential component of its overall market design and operations, with capacity payments making up 27 percent of PJM generators' total revenues in 2016.[1] The MOPR is a critical design element of that market. As the Commission itself observed, "We continue to conclude that the MOPR serves a critical function to ensure that wholesale prices are just and reasonable and should elicit new entry when new capacity is needed. The long-term viability of the PJM market demands an assurance of competitive offers from new entrants."[2]

4. Following the changes implemented in 2013, however, the MOPR has been rendered moot. The 2013 changes created "two narrow, categorical exemptions from the price floor":[3] one for pure merchant projects, and another for self-supply. As seen in the subsequent five Base Residual Auctions ("BRAs"), however, these exemptions have swallowed the rule. Under the new rules nearly 66 GW of planned generation have been exempted from MOPR review, and 21.9 GW have cleared, which accounts for 93 percent of all cleared planned resources and uprates. I discuss this finding in more detail at P 19 below.

5. This substantial new entry under the two exemptions has resulted in a substantial over-supply situation in PJM. In the last five years, each BRA has cleared in substantial surplus, averaging 7.3 GW of capacity procured above the target capacity.[4] Consequently, capacity prices have been well short of the benchmark Net Cost of New Entry ("Net CONE") in each auction—on average, 34 percent of Net CONE. This substantial amount of new entry, both by merchants and self-supply entities, in the face of massive capacity surplus and discount prices is, frankly, puzzling. We designed capacity markets to "elicit

[1] Initial Comments of PJM Interconnection, L.L.C. on the United States Department of Energy Proposed Rule, FERC Docket No. RM18-1 at fn. 90.

[2] November 2011 MOPR Order, 137 FERC ¶ 61,145 at P 2.

[3] *NRG Power Marketing, LLC et al. v FERC*, 862 F.3d 108 at 115.

[4] Target capacity is adjusted for fixed resource requirement procurements, energy efficiency, price-responsive demand, and, when applicable, the short-term resource target.

new capacity *when needed*"[5] and to set prices near Net CONE when new entry is required. Prices as low as we have seen in the past five BRAs should be a signal to retire capacity, not flood the market. We are seeing substantial retirements, too, so much so that the Secretary of Energy has asked the Commission to adopt a rule to forestall exit of resources required for grid resilience, but entry has far outpaced exit.[6] As my testimony in that rulemaking stated, "from my perspective as an economist, the means to forestall 'premature retirement' is to align market prices as closely as possible to the social value of the goods and services provided by all electricity market resources."[7] In this docket, it appears that the pricing of capacity has become unlinked from the underlying economics. The new MOPR exemptions lie at the root of the problem, as they effectively preclude any meaningful market monitoring of offers from new supply.

6. To provide an opportunity for the market to equilibrate, it is my view that the Commission should require PJM to revert back to the MOPR as it existed prior to the 2013 filing, restoring unit-specific monitoring and ending the blanket exemptions.

III. PJM's Capacity Auction Results Are Not Consistent with Market Design

7. We calibrate capacity markets to return, on average over time, revenues needed to support new entry, net of potential earnings in other Commission-jurisdictional markets. PJM's market achieves this by drawing the demand curve, known as the Variable Resource Requirement, so that the market-clearing price equals a proxy for this revenue level, Net CONE, at 1 percent above the reserve margin.[8] Thus when PJM as a whole, or any Locational Deliverability Area within it, is short, or within 1 percent of being short, of the target capacity reserve requirement, capacity prices will be high enough to attract new entry. Conversely, when the market is long capacity, capacity prices will be lower than the equilibrium level. This design was intended to provide a green-light/red-light signal for investment decisions, on a three-year forward time scale to allow a market response.

8. Results of PJM's recent capacity auctions have diverged from this design intent. Each auction has cleared with a substantial surplus, as shown in Table RBS-1 below. The *cleared* surplus understates the true excess supply because approximately 15 GW of

[5] November 2011 MOPR Order, 137 FERC ¶ 61,145 at P 2, emphasis added.

[6] This request is the subject of Docket No. RM18-1.

[7] Affidavit of Robert B. Stoddard on behalf of PJM Power Providers, FERC Docket No. RM18-1 at P 6.

[8] PJM OATT Attachment DD §5.10(a)(1).

capacity that failed to clear is still in service.[9] Consequently, the capacity clearing price has also been well below Net CONE. These prices should have had two results: first, little merchant planned capacity should have cleared and, second, self-supply entities should have refrained from offering additional new capacity into the market. I discuss these two points next.

Table RBS-1
Base Residual Auction Results - RTO

Capacity Year	Target (MW)	Cleared (MW)	Cleared New (MW)	Surplus Cleared (MW)	Net CONE ($/MW-d UCAP)	Clearing Price ($/MW-d)
2016/17	161,974	169,160	4,282	7,185	$331	$59
2017/18	160,882	167,004	5,927	6,122	$351	$120
2018/19	160,607	166,837	2,954	6,230	$299	$150
2019/20	158,984	167,306	5,374	8,322	$299	$100
2020/21	156,239	165,109	2,389	8,879	$293	$77
Total			**20,926**			

Source: PJM Base Residual Auction Results
Notes: Prices and quantities reflect a rule change effective in 2019/20 that adds a performance requirement to capacity. Quantities in 2016/17 and 2017/18 reflect a deduction for the Short-Term Resource Target.

A. The Merchant Exemption Allows Offers Below Cost to Clear

9. From first economic principles, competitive capacity offers from merchant generators should be within a fairly tight band around Net CONE. Net CONE is developed by PJM and its consultants from market data using the same financial modeling any developer would use to secure project financing. While each project may have some idiosyncratic cost advantages or disadvantages relative to Net CONE, these differences should be relatively small because the largest cost components—capital equipment and financing—are substantially identical across the merchant generation industry. At the prices that actually were obtained in these auctions, it is difficult to imagine any merchant entrant that could have met its revenue requirements in that year. Moreover, the low prices result from an over-supply situation in the region, an over-supply that is further exacerbated by the large amounts of net new capacity additions. Given the long lead-time

[9] Wolfe Research, *Power & Utilities*, September 12, 2016, available at http://www.wolferesearch.com/temporary-views/opbuAQJIvDyCejA-dRA-aBFT3VWVIxAKtCnyj3f0GM4.

for new generation build and the very slow rate of load growth in the PJM region, planned projects' developers should not have been optimistic about a near-term reversal of fortunes. It is therefore puzzling that planned capacity not only cleared in each of these auctions, but that the incremental capacity was wholly unnecessary to meet the reliability requirement (as can be seen in Table RBS-1 by comparing the Cleared New amount to the Surplus Cleared amounts shown).

10. One possible explanation could be that developers base their bid on the expected *future* energy margins, while Net CONE is set using *historical* margins.[10] If this difference could explain the gap between Net CONE and recent auction clearing prices, I would expect to see the spark spread increasing from historical levels. The spark spread is the difference between forward prices of electricity versus natural gas, so increasing spark spreads indicate increasing energy margins for gas-fired units. (Substantially all of the planned capacity that cleared over the past five BRAs has been gas-fired.) What we see in fact is the opposite: the forward spark spreads are shrinking, not increasing, as shown in Table RBS-2. Thus, future generation earnings are likely *lower* than historical earnings, so the energy and ancillary service offsets embedded in the Net CONE likely overstate the future earnings of these planned gas-fired units. Based strictly on a predicted market earnings calculation, therefore, their competitive offer prices should have been *above* Net CONE. The declining spark spreads therefore only increase the puzzle as to why merchant generators are offering planned capacity at dramatic discounts to the benchmark.

Table RBS-2a
On-Peak Forward Spark Spreads Going Into Recent BRAs

Year	As of Oct-14	As of Oct-15	As of Oct-16	As of Oct-17
2015	26.55			
2016	24.30	25.04		
2017	20.86	21.32	22.15	
2018	19.34	18.19	18.76	16.16
2019	18.87	16.43	16.92	14.74
2020		14.92	16.45	14.05
2021			15.53	13.73
2022				13.95

Spark spread = on-peak West Hub power price – (7,000 heat rate × M3 gas price)

[10] The Commission considered and rejected calls to use some forward-looking estimate in both the Net CONE calculation (126 FERC ¶61,274 at P 44) and the MOPR (125 FERC ¶61,022 at P 48).

Table RBS-2b
Round-the-Clock Forward Spark Spreads Going Into Recent BRAs

Year	As of Oct-14	As of Oct-15	As of Oct-16	As of Oct-17
2015	17.20			
2016	15.55	18.44		
2017	12.85	14.91	15.38	
2018	11.41	12.17	12.36	10.84
2019	11.10	10.70	11.08	9.86
2020		9.09	10.62	9.41
2021			10.03	9.09
2022				9.26

Spark spread = round-the-clock West Hub power price – (7,000 heat rate × M3 gas price)

11. Another possibility is that the cost inputs to Net CONE are fundamentally flawed and, therefore, it drastically overstates the actual cost of efficient new entry. I do not believe that this is the case. Each element of Net CONE is reviewed intensely by PJM's stakeholders, and the framework for the calculation has been litigated and decided at the Commission. While particular projects may have idiosyncratic cost advantages against the generic unit that is the basis of Net CONE, based on my experience working with developers I believe that these cost advantages could range at best at 10 to 20 percent of Net CONE, nowhere near large enough to account for the discounts of 50% and higher actually observed.

12. The only answer to this puzzle that remains, I believe, is an excessive and unfounded optimism among developers. Low capital costs and abundant gas supplies appear to be driving a race among developers to build a great deal of new capacity as quickly as possible, notwithstanding a substantial surplus of installed capacity, low demand growth, and weak forward spark spreads. The capacity market was intended to be a gating mechanism to moderate supply swings, both up and down. Without an effective MOPR, however, below-cost bids are flooding the market with new capacity, with negative implications I discuss in PP 20–24 below.

B. The Self-Supply Exemption Contributes to Uneconomic Supply

13. In my first affidavit in this docket, I raised a series of concerns with the exemption for self-supply offers as being so broad as to allow effectively unfettered self-supply, gutting the effectiveness of the MOPR in assuring just and reasonable prices that reflect the actual market conditions and costs.

14. Since 2013 the tariff has effectively exempted public power entities from mitigation entirely, because there is no single public power entity large enough to fail the threshold tests. Nonetheless, in five years since the exemption was created, we have seen about 800 MW of new supply enter the market from public power entities.[11] This supply has contributed to an already long market, suppressing capacity prices that these entities must pay to cover their net short positions. I disagree that this exemption supports a "long-standing business model."[12] Public power entities are, in my experience, normally fully covered and therefore can avail themselves of the Fixed Resource Requirement that we created in the Reliability Pricing Model precisely for such entities. *Any* offer from a net short entity should be subject to market monitoring review because that offer can—and has—had material impact on wholesale prices to the benefit of the offering supplier.

15. For the same reason, I strongly disagree that capacity offers from vertically integrated utilities should be exempt from market monitoring. Unlike the public power exemption thresholds, the utility thresholds could potentially take effect. There are vertically integrated utilities in PJM that serve more than 20 percent of load in a Locational Deliverability Area and, therefore, could in theory fail the exemption. In practice, however, the thresholds have never been triggered, allowing thousands of megawatts of new supply into the market without review by the market monitor. This entry has had direct and substantial impacts on wholesale rates since 2013 because the Variable Resource Requirement curves used to clear the capacity auctions are very steep: a mere 3.5% increase in supply reduces prices by 80 percent.[13] Even modest additions of capacity paid for under cost-of-service rates can therefore have dramatic impacts on the wholesale market prices, lowering the capacity charges that the sponsor utility must pay to cover its net short position.

16. Apart from possible portfolio benefits from suppressing capacity prices, a vertically integrated utility or other self-supply entity should opt not to build new capacity when low-cost capacity is available in the market—especially when prices are so much lower than the cost of building new generation, as we have seen over the past five auctions. Even if a utility is developing a new resource, it would usually be more economic to defer building that capacity and instead make year-to-year purchases in the market when

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[11] Most of this public power supply came from the 739.5 MW Fremont Energy Center of American Municipal Power and the 57.3 MW Richmond County Generating Facility of the North Carolina Electric Membership Corporation.

[12] *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 117 (2013).

[13] Along the right-hand limb of the Variable Resource Requirement, which is applicable when the market is long.

market prices are lower than the cost of building. Not only does deferral save money, but it also preserves the option value of not building the planned facility should, ultimately, the planned generation not match with the then-current needs of the utility. For most self-supply entities, however, the decision to invest in new capacity is a lengthy process. One might expect therefore that there will be some lag between any market signal about the need for new capacity and these entities' reactions. That is, we might see some "mistakes" when market conditions soften followed by a correction.

17. In my experience, utilities and other self-supply entities take a portfolio approach to resource development, though, not merely a project-by-project evaluation. As I testified five years ago, the self-supply exemption is overly broad, allowing self-supply entities to use the exemption to reduce the cost of covering their remaining net short position with impunity. The hypothetical I gave for illustration appears to have come true:

> In round numbers, if Dominion Virginia Power has a 20,000 MW capacity obligation, it could be short up to 4,000 MW and still retain its MOPR exemption. Although this is only 2.4% of the RTO-wide capacity requirement, it is a significant portion of the growth in the capacity requirement. The ability to take hundreds or thousands of megawatts of high-cost new entry out of the market as self-supply in PJM, while still having a portfolio of thousands of megawatts that will benefit from the lower capacity prices, clearly opens up the potential for use of the proposed self-supply option beyond "long-standing business models.[14]

C. Evidence shows the exemptions have dominated auction results

18. Considering the actual facts, however, there is strong evidence that merchant generators are not following market signals, and only weak evidence that self-supply is engaging in economically rational decisions. Table RBS-3 compiles information from PJM reports about the amount of capacity that secured a MOPR exemption, the amount that cleared in the BRA. *All* requests for an exemption were granted. First, it is surprising that so much capacity sought an exemption. Qualifying to participate in the BRA is not cheap, yet developers were investing to bring new development projects forward even into a market that was already six to nine thousand megawatts long. What is even more surprising, though, is the large amount of merchant supply that *cleared*. The fact that they cleared tells us that merchant generators were offering their capacity below the

[14] *See* Affidavit of Robert B. Stoddard on behalf of the NRG Companies, FERC Docket No. ER13-535-000, December 28, 2012 at P 12.

clearing price in the auction, yet these prices (shown in Table RBS-1) were a small fraction of Net CONE. Self-supplied capacity mostly dwindles off, as predicted by the rational-with-a-lag discussion above. There is a large addition of self-supplied resources that clears the market in 2019/20, however, defying this trend, and perhaps indicative of an interest in suppressing capacity prices to benefit the self-supply entity's net short position.[15]

Table RBS-3
Exempted and Total New Entry in the BRA

	Requested Exemption Quantity (MW)			Cleared Exemption Quantity (MW)		
Capacity Year	Competitive Entry	Self-Supply	Total	Competitive Entry	Self-Supply	Total
2016/17	11,821	1,432	13,253	3,482	1,433	4,915
2017/18	13,090	940	14,030	4,230	940	5,170
2018/19	13,530	0	13,530	3,518	0	3,518
2019/20	11,165	1,872	12,992	3,804	1,779	5,583
2020/21	12,161	0	12,161	2,675	0	2,675
Total	**61,723**	**4,244**	**65,967**	**17,710**	**4,152**	**21,862**

Source: PJM, RPM Base Residual Auction Results

19. Comparing the quantities in Table RBS-3 with those in Table RBS-1, it quickly becomes clear that effectively all new entry in PJM occurred under one exemption or the other. Table RBS-4 summarizes this observation. In every year but one, 2017/18, exempted capacity accounts for more than all of the *planned* resources clearing in the market, a result that appears counterintuitive. I make the assumption that some unit uprates are included in exempted capacity offers, which better aligns the numbers.[16] Looking across the five years since the new tariff has been in effect, exempted entry has accounted for 93 percent of all cleared incremental quantity (planned plus uprates) in the market. The exemptions have swallowed the rule.

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[15] Most of this generation appears to be Dominion Energy Virginia's Greensville County Power Station, a 1,588 MW gas-fired combined-cycle plant. The general contractor, Fluor, received regulatory approvals five days after the 2019/2020 BRA, suggesting a causal link.

[16] There is more cleared exempt capacity for 2019/2020 than these two categories combined, for which I have no explanation.

Table RBS-4
Sources of New Capacity in the BRA

	Cleared Exemption Quantity (MW)			All Cleared Incremental Quantity (MW)			Exempted as share of Incremental (%)
Capacity Year	Competitive Entry	Self-Supply	Total	Planned resources	Uprates	Total	
2016/17	3,482	1,433	4,915	4,282	1,181	5,463	90
2017/18	4,230	940	5,170	5,927	340	6,267	82
2018/19	3,518	0	3,518	2,954	588	3,542	99
2019/20	3,804	1,779	5,583	5,374	156	5,529	101
2020/21	2,675	0	2,675	2,389	435	2,824	95
Total	**17,710**	**4,152**	**21,862**	**20,926**	**2,699**	**23,625**	**93**

Source: PJM, RPM Base Residual Auction Results

IV. Price Wars in Capacity Markets are not Healthy

20. In competitive markets, economists generally view unbridled competition as in the public interest. “Price reductions are the hallmark of competition.”[17] If a seller wants to discount goods, even below cost, there is—generally—no reason for regulators to stop that behavior. There are good reasons why a seller might take a loss on a sale: perhaps it is a loss-leader, to attract customers who will then buy other goods, a promotion to introduce a new store and build a customer base, or building sales to levels where it can harness increased economies of scale. Nonetheless, discounts are not universally in the public interest. When a market participant sets low prices to drive existing competitors out of the market or to forestall entry by rivals—so-called “predatory pricing”—consumers may benefit from low prices in the near term but are ultimately harmed by higher prices and worse product mix in the future. Despite the Supreme Court’s finding that predatory pricing is “rarely tried, and even more rarely successful”[18], “it is now the consensus view in modern economics that predatory pricing can be a successful and fully rational business strategy; and we know of no major economic article in the last 30 years that has claimed otherwise. In addition, several sophisticated empirical case studies have confirmed the use of predatory pricing strategies.”[19]

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[17] Patrick Bolton, Joseph F. Brodley, and Michael H. Riordan, “Predatory Pricing: Strategic Theory and Legal Policy,” available at https://www.justice.gov/atr/predatory-pricing-strategic-theory-and-legal-policy (“Bolton *et al.*”).

[18] See *Matsushita Elec. Ind. Co. v. Zenith Radio*, 475 U.S. at 590.

[19] Bolton *et al.*

21. Although the facts before us may not fit the requirements for predatory pricing, there is cause for concern about the effect of prolonged market over-build on PJM's markets and capital infrastructure. Far more capital investment is occurring than warranted by market fundamentals, and so the PJM markets are not achieving reliability at least cost. Furthermore, below-cost capacity prices and tight spark spreads put great pressure to retire on older units, particularly those that rely on coal and nuclear fuel that have less operating flexibility and higher fixed costs than their gas-fired competitors. Low energy prices that result from the excess capacity in PJM's markets also increase the financial costs to states and their consumers of achieving state policy goals of expanding renewables, energy efficiency, and demand response programs.

22. The amount of extra societal cost from the current excess capacity margins is large by any standard. As shown in Table RBS-1, the most recent BRA cleared 8,879 MW of capacity in excess of its reliability requirement. Since the 2013 rule changes, 20,926 MW of new capacity has been added, so all of this excess is newly deployed capital. The overnight capital cost of building a new combined-cycle unit is approximately $900/kW.[20] Multiplying this cost against the surplus quantity, we see that approximately $8 billion was invested ahead of requirements. Another way to look at this surplus is to track the annual surplus valued at the then-current Net CONE. This metric is appropriate because most of the surplus is new generation, and Net CONE is a reasonable proxy for the true daily cost of such capacity. Multiplying the surplus cleared in the market by Net CONE, we see that the economic value of the surplus capacity has been about $4.2 billion over five years. This number increases each year that the surplus continues. These figures understate the true cost of the surplus, however, because they exclude the approximately 15 GW of existing resources that did not clear but remain in service. Including these units would nearly triple the cost estimates. Consumers do not directly bear these higher costs; indeed, they are paying lower capacity charges because of the excessive amount of new entry. Society is paying, however, and that is the metric of greatest importance.

23. Ultimately these low prices are not sustainable. Surplus capacity margins suppress not only capacity prices but also energy margins. For example, PJM has had very few price spikes during peak summer periods in recent years, which are normally the times when

[20] In testimony to Virginia's State Corporation Commission, Dominion Virginia Power forecast the overnight cost (*i.e.*, excluding financing costs) of its Brunswick County Project at $891/kW. The Energy Information Administration's Annual Energy Outlook 2017 estimates overnight costs of $923/kW for a convention combined-cycle unit and $1,013/kW for an advanced combined-cycle unit (see *Assumptions to Annual Energy Outlook 2017* Table 8.2, available at https://www.eia.gov/outlooks/aeo/assumptions/pdf/electricity.pdf .)

generators hope to earn extra energy margins to pay for the substantial fixed costs of their facilities.[21] In the face of low load growth, persistent overbuild, and suppressed margins, units that would have been financially viable but for the surplus entry will instead retire. Although these retirements may be efficient in a narrow sense, they raise broader questions about the resilience of the resulting power system.

24. Regardless of why suppliers—merchant or regulated—are offering planned generation into PJM's markets at prices far below reasonably estimated competitive cost levels, these offers have a very real, negative impact on providing reliable electric service at least cost. Unfortunately, the market design element that was intended to provide the Independent Market Monitor the opportunity to review these offers—namely, the Minimum Offer Price Rule—has been gutted such that virtually all offers enter the market without monitor review. Rather than assuring that all offers into PJM's capacity auctions are consistent with costs, the market-sized holes in the MOPR have allowed merchant and self-supply entities alike to suppress prices, over-supply the market, and drive competitors from the market, to the long-run harm of system resilience and cost to serve load. As the Commission stated originally, "if the resource is not needed by the market (based on the going-forward costs that would be incurred under PJM's new requirements), its entry would inefficiently suppress capacity market prices. Under these circumstances, we conclude that subjecting such a resource to the MOPR is reasonable."[22] The results since these changes went into effect in 2013 have been contrary to the market design intent and have resulted in substantial additions of unneeded generation entering the market. I therefore recommend that the Commission reset the MOPR rules to their prior state.

[21] From June to September 2017 (inclusive), PJM's hourly integrated real-time system energy price exceeded $100/MWh in only 25 of the 2,928 hours.

[22] *Order Accepting Proposed Tariff Revisions, Subject to Conditions, and Addressing Related Complaint*, 135 FERC ¶61,022 at P 141, April 12, 2011.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	Docket No. ER13-535-000

AFFIDAVIT OF ROBERT B. STODDARD
ON BEHALF OF THE NRG COMPANIES

I, Robert B. Stoddard, being duly sworn, depose and state that the contents of the foregoing Affidavit on behalf of the NRG Companies is true, correct, accurate and complete to the best of my knowledge, information and belief.

Robert B. Stoddard

SUBSCRIBED AND SWORN
before me this 14th day of November 2017

Notary Public

My commission expires: 8/4/22

Kathleen Dodge
Notary Public • State of Maine
My Commission Expires August 4 2022