139 FERC ¶ 61,115
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Philip D. Moeller, John R. Norris,
and Cheryl A. LaFleur.

PJM Interconnection, L.L.C. Docket No. ER11-4628-000

ORDER ON TECHNICAL CONFERENCE

(Issued May 14, 2012)

I. Introduction

1. On September 23, 2011, PJM Interconnection, L.L.C. (PJM) submitted proposed revisions to its Open Access Transmission Tariff (OATT), the Amended and Restated Operating Agreement of PJM (Operating Agreement), and the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region (RAA), pursuant to section 205 of the Federal Power Act (FPA).[1] PJM stated that these changes were intended to support the development of price responsive demand (PRD), an initiative in which an end-use customer varies its load in response to wholesale electricity prices. PJM noted that, with the advent of advanced metering technologies and the introduction of retail rate structures capable of adjusting in response to wholesale prices changes, PJM's tariff revisions are required to both complement these state initiatives and better serve the needs of PJM's markets.

2. PJM further stated that its proposed revisions would apply in both the PJM capacity market, as part of PJM's Reliability Pricing Model (RPM) protocols governed by the RAA, and in PJM's day-ahead and real-time energy markets. PJM requested that its proposed revisions be made effective on December 15, 2011, as to its capacity market, and on May 1, 2012, as to its energy markets.

3. In an order issued December 14, 2011, the Commission accepted and suspended PJM's filing for a five month period to become effective May 15, 2012, subject to refund, and to the outcome of a staff-led technical conference.[2] The technical conference was convened by Commission Staff on February 14, 2012. Following the technical conference, interested parties submitted written comments and reply comments.

[1] 16 U.S.C. § 824e (2000).

[2] *PJM Interconnection, L.L.C.*, 137 FERC ¶ 61,204 (2011) (December 14 Order).

4. For the reasons discussed below, and upon our further review of the record, as supplemented, we accept PJM's filing, effective May 15, 2012, subject to conditions, and the submittal of four compliance filings by PJM (or, as specified, by PJM's independent market monitor (IMM)), within (i) 60 days of PJM's release of the results of PJM's May 2014 base residual auction; (ii) 60 days of the date of this order, (iii) six months of the date of this order; and (iv) nine months of the date of this order. In an informational filing to follow the release of the results of its second base residual auction, PJM should assess the penetration of PRD into PJM's markets and evaluate whether any of PJM's PRD rules might be operating as unreasonable barriers to greater PRD penetration. In the 60 day compliance filing, PJM is directed to revise its proposed tariff to: (i) include definitions of supervisory control and automation; (ii) clarify the description of the transition period; and (iii) include the methodology it will use to impose charges on Load Serving Entities (LSE) for PRD committed in the base residual auction and the third incremental auction. In the six-month compliance filing, PJM is required to revise its proposed tariff to provide rules for non-LSE PRD providers to submit PRD Curves in the day-ahead and real-time markets. Within nine months of the date of this order, PJM must either file tariff changes allowing loads to provide both PRD and supply-side demand response, or an informational filing apprising the Commission of PJM's progress developing these rules.

II. Background

A. PJM's September 23, 2011 Filing

5. In its September 23, 2011 filing, PJM outlined the retail market developments giving rise to its filing. Specifically, PJM noted that, throughout the PJM region, states and other retail jurisdictions are in the process of installing advanced metering infrastructure (AMI), or smart meters, that can record usage on an hourly basis. PJM further stated that these retail entities are in the process of authorizing dynamic retail rate structures, with rates set to rise or fall in response to wholesale energy prices. PJM asserted that, under these initiatives, consumers would be encouraged to voluntarily reduce their consumption when prices rise in the regional wholesale electricity market. PJM also identified a number of wholesale benefits attributable to these developments.[3]

[3] Specifically, PJM noted that PRD, when fully implemented at both the wholesale and retail level, would: (i) slow the growth in peak demand and thus defer the need for generation investment and certain transmission upgrades; (ii) reduce overall costs by improving existing asset utilization; (iii) help reduce the frequency and magnitude of energy shortage events; (iv) introduce demand elasticity; (v) improve the predictability of demand requirements and power flows; (vi) preserve short-term system reliability; (vii) reduce planning reserves; and (viii) reduce the uncertainty associated with load forecasts. *See* December 14 Order, 137 FERC ¶ 61,204 at P 5.

6. To facilitate PRD at the wholesale level, PJM proposed tariff revisions to recognize and complement the introduction of retail PRD, including proposed rule changes authorizing PRD providers to make PRD commitments in PJM's capacity market, subject to the submission of a PRD Plan (a document identifying the PRD provider's load and supporting its PRD commitment) and a registration requirement (due to be completed prior to the start of the relevant delivery year).[4] PJM also proposed to reduce an LSE's capacity obligation linked to PRD commitments in its delivery area to reduce load in response to a Maximum Generation Emergency.[5]

7. PJM also proposed tariff revisions addressing the relationship and interaction between PRD and PJM's existing demand response programs,[6] the phase-in of PRD, testing requirements, and the means by which a PRD provider will be permitted to participate in PJM's day-ahead and real-time energy markets.

B. <u>December 14 Order</u>

8. The December 14 Order found that PJM's filing represented an important, innovative proposal to support the development of PRD and noted that PJM's PRD proposal had broad stakeholder support, including the support of retail regulatory authorities.[7]

9. As discussed more fully below, however, the December 14 Order also found that intervenors had introduced a number of technical and operational issues that raised questions as to the justness and reasonableness of PJM's proposal. Accordingly, the December 14 Order accepted and suspended PJM's filing for a five month period to become effective May 15, 2012, subject to refund and the outcome of a staff technical

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[4] PJM proposed to define the term, "PRD provider" as a Load Serving Entity (LSE), or other eligible market participant, such as a curtailment service provider (CSP), that can satisfy the functional requirements for providing PRD. *See* proposed RAA at section 1.71B.

[5] *See* PJM OATT at section 1.3.13.

[6] PJM stated that to prevent duplicative commitments of the same load reduction capability, loads registered as PRD, under its proposal, would be barred from making commitments to simultaneously provide other demand response functions in the energy and capacity markets. Specifically, PJM stated that for each delivery year that a load is identified as PRD, that load would be ineligible to be registered as a demand response resource in the energy markets (Economic Load Response or Emergency Load Response), or to be used as a basis for a capacity resource in any RPM auction.

[7] *See* December 14 Order, 137 FERC ¶ 61,204 at P 70.

conference. In addition to the issues raised by intervenors, the Commission held that the technical conference should address additional specific issues discussed more fully below.[8]

III. Technical Conference

10. In a notice issued January 18, 2011, the Commission directed PJM to submit, in advance of the technical conference, written answers to the issues identified by the Commission in the December 14 Order.[9] PJM submitted its responses, as directed, on February 10, 2012.[10] The technical conference was held February 14, 2012. Post-technical conference written comments were submitted by PJM, Old Dominion Electric Cooperative and Direct Energy Business, LLC (ODEC-Direct Energy); the Ohio Public Utilities Commission (Ohio Commission); the PJM Industrial Customer Coalition (PJM-ICC); Exelon Corporation (Exelon); and PJM-ICC joined by Viridity Energy, Inc. (Viridity/PJM-ICC). Post-technical conference reply comments were submitted by PJM and PJM-ICC.

11. On February 23, 2012, the Pennsylvania Public Utilities Commission (Pennsylvania Commission) submitted a motion to intervene out-of-time. When late intervention is sought after the issuance of a dispositive order, the prejudice to other parties and burden upon the Commission of granting the late intervention may be substantial. Thus, movants bear a higher burden to demonstrate good cause for granting such later intervention.[11] The Pennsylvania Commission has not met this higher burden of justifying its late intervention, and thus the intervention is rejected.

IV. Discussion

12. Unless otherwise discussed below, we accept PJM's PRD proposal, effective May 15, 2011, subject to conditions and the submission of certain compliance filings, as specified.

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[8] *Id.* P 71.

[9] *See PJM Interconnection, L.L.C.*, Docket No. ER11-4628-000, Notice of Staff Technical Conference (January 18, 2012).

[10] As relevant to our determinations herein, PJM's pre-technical conference comments are summarized below.

[11] *See, e.g.*, *Midwest Independent Transmission System Operator, Inc.*, 102 FERC ¶ 61,250, at P 7 (2003).

A. Whether Non-LSE PRD Providers Should be Eligible to Receive the PRD Credit

1. Proposed Tariff Revisions

13. PJM proposes to quantify the capacity savings resulting from PRD through a PRD Credit. PJM proposes to limit its payment of PRD Credits to LSEs only, even though both LSEs and non-LSE PRD providers may be responsible for providing the PRD responsible for the capacity savings at issue. PJM asserts that under its proposal the LSE will pay for RPM capacity obligations as if PRD were not provided, but the LSE will also receive the PRD Credit as an offset that reflects the capacity savings resulting from the provision of PRD.[12]

14. PJM asserts that this approach will put the LSE in the same position as if PJM had simply reflected the lower peak load level by directly reducing the LSE's capacity obligation. PJM adds that the PRD Credit serves as an accounting device and that when the PRD Credit is credited against an LSE's capacity payment, the net capacity payment will equal the cost for the capacity acquired for the LSE in the RPM market. PJM argues that its proposal preserves the fundamental wholesale capacity market rule that LSEs should only procure and pay for capacity needed to meet the peak loads of the customers they serve. PJM states that its proposed mechanism also supports and facilitates efforts at the retail level, or through bilateral or other arrangements outside RPM, to apportion the benefits of PRD between LSEs and non-LSE PRD providers.

2. Intervenor Arguments

15. Energy Connect, Inc. and EnerNOC, Inc. (ECI, *et al*.) argue that PJM's proposal to exclude a non-LSE PRD provider from being eligible to directly receive a PRD Credit is inefficient, adds unnecessary costs to the PRD process, and will therefore interfere with price signals in the marketplace. ECI, *et al*. assert that, under PJM's proposal, an LSE will be placed in a position where it can insert itself directly into the compensation process between the end-use customer and the wholesale market, while a non-LSE PRD provider cannot. ECI, *et al.* characterize PJM's proposal as unduly discriminatory and preferential.[13] ECI, *et al.* add that, under PJM's proposal, only LSEs are likely to register as PRD providers.

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[12] The PRD Credit is approximately equal to the amount of PRD in the LSE's delivery area multiplied by the RPM capacity auction clearing price. The exact calculation is described in PJM's revised RAA at Schedule 6.1(G).

[13] ECI, *et al*. Protest at 4 (citing *PJM Interconnection, L.L.C.* 117 FERC ¶ 61,331 at P 113 (2006) (PJM 2006 Order) (finding that a settlement that included provisions giving preferential treatment to signatories was unduly preferential and discriminatory);

(continued…)

16. ECI, *et al.* also argue that there would be significant market benefits were non-LSE PRD providers made eligible to receive the PRD Credit. Specifically, ECI, *et al*. assert that such a rule would ensure that the maximum amount of price-responsive retail load would be incorporated into wholesale market operations. ECI, *et al*. add that the PRD construct, at its heart, is a mechanism to allow customers that are willing to commit demand reductions, based on price, to be credited with reduced capacity obligations for this commitment. ECI, *et al*. conclude that customers should not be precluded from participation in PRD by an LSE that declines to provide the opportunity for participation.[14]

17. Similarly, Viridity asserts that PJM's proposal, by precluding non-LSE PRD providers from receiving the PRD Credit, tilts the competitive playing field in favor of the LSE that receives the monetary PRD Credit and against other prospective PRD providers. In addition, the DR Coalition raises concerns over equitable treatment in the awarding of PRD Credits as well as over the exclusion of non-LSE PRD providers from direct compensation.

3. PJM's Pre-Technical Conference Comments

18. PJM, in its pre-technical conference comments, responds to the Commission's directive, in the December 14 Order, that PJM justify its proposal to restrict non-LSE PRD providers from receiving PRD Credits directly, including an explanation of how any contractual arrangements regarding the distribution of the PRD Credits, as between the LSE and a non-LSE PRD provider, might be structured and/or performed.

19. PJM states that, under its current tariff, if an LSE is able to reduce its forecast peak loads, based in part on an expected contribution from PRD, and thereby reduce its capacity obligation, there would be no means to quantify the degree to which PRD is responsible for that reduction and capacity cost savings. PJM adds that because these savings are a key potential benefit of PRD, the uncertainty in the current tariff about that benefit could hinder efforts at the retail level to leverage smart meters and dynamic pricing, including efforts to permit CSPs to expand the pool of PRD providers for the benefit of end-users in the retail jurisdiction.

Midwest Independent Transmission System Operator, Inc., 122 FERC ¶ 61,172, at P 412 (2008) (MISO 2008 Order) (finding that a cost allocation proposal supported by majority of stakeholders was not based on cost causation principles inequitable and unjust and unreasonable)).

[14] The Demand Response and Smart Grid Coalition (DR Coalition) and Viridity also filed comments in support of non-LSE PRD providers being eligible to receive the PRD Credit.

20. PJM states that its filing responds to these existing dynamics in two ways: first, by establishing the PRD Credit to quantify the benefit of PRD in reducing an LSE's capacity obligations; and second, by allowing non-LSE PRD providers to submit a PRD Plan to PJM. PJM argues that this approach will provide retail regulators sufficient flexibility to design programs that foster PRD, incent LSEs, CSPs, and retail customers to participate as PRD, and to prescribe appropriate compensation to CSP PRD providers from end-use customers.

21. PJM states that compensating non-LSE PRD providers at the wholesale level by assigning to these entities some form of the PRD Credit could represent a suitable next-step in the development of second-stage PRD enhancements. PJM argues, however, that currently, such an approach has not garnered support among PJM's stakeholders and is not required at this time.

22. Finally, PJM clarifies that it does not seek to define or limit contractual agreements addressing the distribution of PRD Credits, as between an LSE and a non-LSE PRD provider. PJM states that these matters will be addressed by state retail regulatory authorities.

4. PJM's Post-Technical Conference Comments

23. PJM argues that its proposal to issue PRD Credits to the relevant LSE, not to the relevant PRD provider, is appropriate and not unduly discriminatory under section 205(b) of the Federal Power Act (FPA).[15] Specifically, PJM argues that, under its proposal, none of the proscriptions set forth in FPA section 205(b) are implicated, because there is no "unreasonable difference in rates" or other practices "between localities or between classes of service," and no "undue prejudice or disadvantage" imposed on any person. PJM argues that, under its proposal, all that is at issue is how to adjust the capacity obligation of the only RPM customer – the LSE – upon whom the capacity obligation is assessed. PJM adds that its proposed PRD Credit is simply an accounting convention designed to make transparent the reduction in the LSE's capacity charges due to PRD loads. PJM asserts that PRD is not a supply-side resource competing in the RPM auctions to satisfy a reliability requirement, but rather is a reduction in that reliability requirement made before the auction is held.

[15] 16 U.S.C. § 824d(b) (2000) ("No public utility shall, with respect to any transmission or sale subject to the jurisdiction of the Commission, (1) make or grant any undue preference or advantage to any person or subject any person to any undue prejudice or disadvantage, or (2) maintain any unreasonable difference in rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service.").

24. PJM argues that, in the vast majority of cases raising undue discrimination concerns under the FPA, the relevant issue involves customers of a Commission-jurisdictional service and whether a given customer that did not receive a favorable rate, term or condition is, or is not, similarly situated *vis a vis* another customer. PJM asserts that here, however, there is only one customer at issue, i.e., the LSE, a customer that has a capacity obligation under PJM's RPM rules, and that is assessed Locational Reliability Charges.[16]

5. Additional Post-Technical Conference Comments

25. ODEC-Direct Energy support PJM's proposal to restrict the PRD Credit to LSEs, given that PJM's RPM rules assign capacity obligations to LSEs and the PRD Credit would appropriately operate as an offset. ODEC-Direct Energy characterize this proposal as a transparent and distinct metric which will allow retail regulators to roughly quantify the money saved as a result of PRD. ODEC-Direct Energy add that PJM has committed to revisiting PRD participation issues following PRD's implementation and the passage of two RPM base residual auctions.

26. ODEC-Direct Energy argue that while providing payments, or credits, to third parties is reasonable for supply-side demand response, such a construct does not apply to PRD where the PRD Credit is a quantification for informational purposes only, not a revenue stream, and given that the reduction at issue is treated by PJM as avoided electricity usage. ODEC-Direct Energy argue that PJM's proposal to treat non-LSE PRD providers differently than LSEs, with respect to PRD Credits, is reasonable, given the differences between a supply-side demand resource and PRD. ODEC-Direct Energy assert that requiring PJM to mirror, in the PRD Credit, its treatment of revenue streams under its demand resource programs would effectively eliminate important distinctions between the two, which would reduce opportunities for PRD to participate in PJM's markets.

27. ODEC-Direct Energy also argue that contracts, or other arrangements for spreading PRD's financial benefits, as between the LSE and non-LSE PRD provider, should be handled at the retail level, not by the Commission. ODEC-Direct Energy assert that were the Commission to require PJM to monetize the PRD capacity benefit relative to the non-LSE PRD provider, the latitude of the retail regulatory authority to implement PRD at the retail level could be compromised. In addition, ODEC-Direct Energy argue that the retail regulatory authority's obligation to ensure that load receives the benefits of its demand reduction could be impeded. ODEC-Direct Energy conclude that, under these

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[16] The Locational Reliability Charge is equal to the LSE's capacity obligations multiplied by the RPM capacity price. *See* RAA at Article 7, section 7.2; and PJM OATT at Attachment DD, section 5.14(e).

circumstances, LSEs could be forced to pay for their full capacity obligation without any offset to reflect the PRD Credit.

28. The Ohio Commission agrees that the PRD Credit should be made to the LSE, not to a non-LSE PRD provider, an entity that has no capacity obligation. The Ohio Commission notes that when a CSP is involved in managing consumer responses to dynamic retail pricing it will do so either as a service provider to the LSE or directly *vis a vis* the retail consumer. The Ohio Commission asserts that, in either case, the Commission should not adopt rules that could limit the innovation manifested by these contractual relationships, or limit state commission supervision over these matters.

6. <u>Commission Determination</u>

29. For the reasons discussed below, we acceptPJM's proposal to limit the PRD Credit to LSEs, subject to conditions.

30. Under PJM's proposal, a PRD provider is defined as an LSE that provides PRD or an entity without direct load serving responsibilities that has entered into a contractual arrangement with an end-use customer served by an LSE.[17] PJM proposes that only an LSE be supplied the PRD Credit given LSEs' direct obligations and responsibilities in PJM's capacity market. PJM adds that, given the role played by LSEs in PJM's capacity market, PJM's proposal to make the PRD Credit payable directly to the LSE is not unduly discriminatory.

31. We find that PJM's proposal to provide the PRD Credit to LSEs is reasonable and not unduly discriminatory. PJM's approach will have the same economic consequences as if it had merely reduced the LSE's capacity obligation, without paying any credit, but will provide the added benefit of greater transparency.

32. We reject ECI, *et al.*'s argument that limiting the PRD Credit to LSE's is unduly discriminatory. As PJM points out, the PRD Credit is not a payment for service, but is only an accounting mechanism for showing the reduction in capacity payments resulting from the reduction in demand. Since only the LSE has demand and pays for capacity, we find it reasonable for PJM to provide the credit solely to the LSE that pays for capacity. In this regard, we do not find that PRD providers and LSEs are similarly situated since pure PRD providers have no capacity obligation that can be reduced.

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[17] PJM proposes that any PRD provider may commit that certain loads shall not exceed a specified demand level at specified prices during a maximum generation emergency, as a consequence of the implementation of PRD. In response to these commitments, PJM proposes to adjust the reliability requirement to reflect the committed PRD. PJM also proposes to assess compliance charges to any PRD provider that fails to fully honor its PRD commitments for a given delivery year.

33. We nonetheless are concerned about competition among all players in the demand response arena. Increased competition to enroll retail loads in price-responsive programs, for example, could speed the development of PRD over time, thus advancing the wholesale benefits which PJM attributes to implementation of PRD, including but not limited to reducing costs to consumers. Accordingly, we accept PJM's proposal to limit the PRD Credit to LSEs, subject to an assessment to be submitted by PJM, and separately by the IMM, addressing the market effects of PJM's proposal, within 60 days of PJM's release of the results of its May 2014 base residual auction. Specifically, the report should assess the penetration of PRD into PJM's markets, and evaluate whether any of PJM's PRD rules might be acting as unreasonable barriers to greater PRD penetration.

B. Transition Period

1. Proposed Tariff Revisions

34. PJM proposes to implement PRD in the PJM capacity market on a phased-in basis. Specifically, PJM proposes to cap the amount of PRD that can register in the RPM auction for the first three delivery years.[18] PJM proposes to allocate these caps among zones, or sub-zones, and among LSEs within each zone or sub-zone.[19] PJM argues that this phased-in approach is appropriate, given that PRD is also being phased-in on the retail level. PJM thus notes that a phased-in approach will allow PJM and market participants to gain experience with the operation of PRD prior to its full implementation. In addition, PJM notes that its transition proposal was among the accommodations required in building a strong stakeholder consensus in support of PJM's filing.

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[18] In its September 23, 2011 filing, PJM proposed a cap of 1,500 MWs, for the delivery year commitments made in the May 2012 base residual auction for the 2015-16 delivery year. PJM notes in its pre-technical conference comments, however, that the proposed phase-in, for that year, was rendered moot by the suspension period imposed by the Commission in the December 14 Order. Accordingly, PJM's surviving proposal would consist of a cap of 2,500 MWs for the delivery year commitments made in the May 2013 base residual auction; 3,500 MWs for the delivery year commitments made in the May 2014 base residual auction; and 4,000 MWs for the delivery year commitments made in the May 2015 base residual auction.

[19] PJM states that, as between PRD loads in a zone, the cap for the zone would be allocated based on the PRD reservation prices associated with the loads, lowest to highest. For loads in the same zone with the same PRD registration price, the available PRD amounts would be allocated *pro rata*, based on each load's share of the preliminary zonal peak load forecast for such zone. *See* proposed RAA at Schedule 6.1(N).

2. Intervenor Arguments

35. The Ohio Commission objects to PJM's proposed phase-in of PRD. The Ohio Commission argues that, under PJM's allocation of its proposed participation caps, PRD allotments will be made without regard to need. The Ohio Commission characterizes this *pro rata* assignment as unreasonable and discriminatory and claims that it will impose unnecessary costs on those most reliant on PRD as an alternative to transmission or generation capacity additions.[20] The Ohio Commission adds that there is no reasonable justification for restricting the use of PRD over the transition period proposed by PJM when the effect of these caps will be to allow selected market participants to limit competition and protect their capacity revenues to benefit their private business interests.

3. PJM's Pre-Technical Conference Comments

36. PJM responds to the Commission's directive in the December 14 Order, that PJM explain, in its pre-technical conference comments, the basis for the caps on RPM participation during PJM's proposed transition period.

37. PJM urges that its proposed transition period be considered within the context of the stakeholder proceeding in which it was approved as a compromise measure facilitating super-majority support for PRD. PJM adds that its proposal is reasonable, given that the three-year phase-in at issue is similar to the transition period applicable to PJM's phased implementation of locational capacity pricing in PJM's capacity market. PJM argues that, in that case, the Commission recognized that the transition period proposed would allow market participants a period of time to understand and get used to the dynamics of the market prior to full implementation of PJM's pricing revisions – a rationale, PJM asserts, that applies equally here.[21] PJM adds that the phase-in it proposes is appropriate, given that successful PRD implementation will require significant adaptation, testing, and training by market participants, particularly LSEs.

38. Finally, PJM clarifies that no portion of its cap would go unused in one zone, while PRD is turned away in another zone. Instead, PJM states that it would allocate and apportion these transition-period limits among PJM's zones only when the overall limit for the PJM region is exceeded. PJM states that if instructed to do so, it will revise the relevant portion of the RAA in a compliance filing to make this intention clear.

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[20] The Ohio Commission argues that dynamic retail pricing represents an important option that may be considered in response to anticipated generation retirements.

[21] PJM Pre-technical Conference Comments at 11-12 (citing PJM Interconnection, L.L.C., 117 FERC ¶ 61,331, at P 68 (2006)).

4. Commission Determination

39. We conditionally accept PJM's proposed phase-in plan for implementing PRD. Subject to the conditions discussed below, we agree that PRD is a new mechanism with which PJM and its market participants will need time to gain experience and the caps ensure that unanticipated results will not significantly jeopardize or affect the system. Successful implementation will require significant adaptation, testing, and training by all market participants and the phase-in plan will ease this transition. Furthermore, this transition period will allow PJM to refine and improve the PRD program before the caps are lifted. Thus, we find that the phase-in plan, as proposed, and subject to the revisions discussed below, is reasonable and non-discriminatory and will allow all market participants an opportunity to participate in the evolving PRD market.

40. We reject the Ohio Commission's argument that PJM's proposed PRD participation caps, as applicable over a phased-in transition period, will produce independent zonal-level caps that will operate to limit a market participants' ability to participate in the PRD market. As PJM clarifies in its answer, the phase-in caps it will implement will be administered on a region-wide basis, such that no portion of this cap will go unused in any given zone if demand in another zone has become over-subscribed but the region-wide limit remains unmet.[22] Until the overall region-wide limit is reached, then, the zones with the greatest development of PRD will be allowed to register the most PRD and PJM will not limit PRD commitments in any zone until the overall limit is reached for the relevant delivery year.[23]

41. However, we find that PJM's proposed tariff language implementing its phase-in proposal, is unclear with respect to the design of its participation caps. Specifically, we find that PJM's proposal is vague regarding how PJM will allocate and apportion transition period limits should the overall limit for the PJM region be exceeded. Accordingly, we accept PJM's phase-in proposal, subject to the condition that PJM revise the relevant sections of the RAA, in its compliance filing. In addition, PJM should explain what the effects of the caps will be for PRD providers who previously registered loads to participate as PRD, but whose PRD commitments are not accepted because of the transition period caps.

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[22] PJM Answer at 13.

[23] The *pro rata* shares will be allocated among the PRD loads with the lowest PRD reservation prices regardless of zone.

C. Maximum Emergency Service Level and Peak Load Contribution

1. Proposed Tariff Revisions

42. PJM proposes to allow a PRD provider to commit, in advance of an RPM base residual auction (and, in some cases, in advance of the third incremental auction), that its loads will reduce to a specified service level, the Maximum Emergency Service Level, whenever: (i) PJM declares a maximum generation emergency;[24] (ii) LMP reaches a price specified in advance by the PRD provider;[25] and (iii) the relevant price component does not exceed PJM's energy offer price cap.

43. PJM states that the PRD provider will be required to calculate, subject to PJM review, the increment of load reduction provided by PRD, i.e., the difference between the Maximum Emergency Service Level and the load level absent PRD. PJM explains that the expected service level absent PRD, known as the Zonal Expected Peak Load Value of PRD, [26] is based on the expected Peak Load Contribution of the PRD load.[27] PJM states that this calculation must be based on the same methods and assumptions PJM uses in its load forecasts.

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[24] *See supra* note 5.

[25] PJM proposes that, if the load forecast for the delivery year increases from the base residual auction to the third auction for a locational deliverability area, the PRD Provider be permitted to commit additional PRD in that locational deliverability area for that year, in an amount not to exceed, in the aggregate, the total increase in the load forecast for that locational deliverability area. PJM states that it will specify in its manuals how this overall increase will be allocated among PRD providers in the locational deliverability area.

[26] PJM defines a PRD provider's Zonal Expected Peak Load Value of PRD as "the expected contribution to Delivery Year peak load of a PRD Provider's Price Responsive Demand, were such demand not to be reduced in response to price, based on the contribution of the end-use customers comprising such Price Responsive Demand to the most recent prior Delivery Year's peak demand, escalated to the Delivery Year in question, as determined in a manner consistent with the Office of the Interconnection's load forecasts used for purposes of the RPM Auctions." *See* RAA at section 1.71C.

[27] "Peak Load Contribution" is the average of the end-user's actual load during the five coincident peak hours of the preceding delivery year. *See* PJM Manual 19 at section 4.4.

2. Post-Technical Conference Comments

44. PJM-ICC seeks clarification regarding the relationship between the Maximum Emergency Service Level, as proposed by PJM in its filing, and a Peak Load Contribution, as used to assign capacity cost responsibility to individual customers. Specifically, PJM-ICC seeks clarification, with appropriate tariff changes, that a PRD customer's Maximum Emergency Service Level will operate as a cap on the customer's capacity obligation. PJM-ICC states that neither the RAA nor the PJM OATT states clearly that a PRD customer's capacity obligation will not exceed its Maximum Emergency Service Level. PJM-ICC argues that, absent this guarantee, PRD will provide little or no value to customers.

3. PJM's Post-Technical Conference Reply Comments

45. PJM clarifies that an LSE's capacity obligation will be based on its Peak Load Contribution as if there were no PRD committed. PJM states that electric distribution companies will continue to use the methods they use now for calculating Peak Load Contributions, with an addback associated with demand reductions associated with PRD during the five coincident peak hours. PJM adds that the load obligations for both LSEs and end-use customers would be based on their Peak Load Contribution based capacity obligation with an offset due to their share of the PRD Credit.

4. Commission Determination

46. We will accept PJM's tariff provision and find no need for additional clarification of the tariff language. We find that the relationship between the Maximum Emergency Service Level, as proposed, and Peak Load Contribution is sufficiently clear in the tariff.[28] Specifically, the Maximum Emergency Service Level and the Peak Load Contribution move together. If a load's Peak Load Contribution rises between the base residual auction and the delivery year, its Maximum Emergency Service Level will rise as well, and *vice versa*. More specifically, the Maximum Emergency Service Level is equal to the difference between the Zonal Expected Peak Load Value of PRD, which is based on loads' Peak Load Contributions, and the PRD commitment provided by the consumer(s).[29] Thus, the Maximum Emergency Service Level is a derived term and is dependent on the Zonal Expected Peak Load Value of PRD. It cannot serve as a cap on the capacity obligation as PJM-ICC proposes.

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[28] RAA Schedule 6.1(C)

[29] PRD Plans must include the expected peak load value and the applicable Peak Load Contribution Data. *See* RAA at Schedule 6.1, section D(iii). PJM notes that it follows that a PRD Provider cannot commit that an end-use customer will reduce by more than that customer's expected Peak Load Contribution.

D. Testing of PRD Participants

1. Proposed Tariff Revisions

47. PJM proposes that, if it has not declared a Maximum Generation Emergency during a given delivery year, a PRD provider be required to demonstrate that it has tested in PRD-eligible load for at least a one-hour period during any hour in which an emergency could be called.[30] PJM argues that if committed PRD does not respond when called upon and PJM is faced with greater peak loads than expected, peak period reliability may be adversely affected. PJM proposes that PRD providers that fail to reduce to their Maximum Emergency Service Level will be assessed a compliance charge.

2. Intervenor Arguments

48. The Ohio Commission and the Illinois Commerce Commission (Illinois Commission) object to PJM's proposed testing requirements, to the extent these requirements may necessitate a one-hour interruption of PRD loads associated with residential and small consumers. The Ohio Commission argues that requiring residential and small consumers to experience one-hour service curtailment, in the absence of any emergency, solely for testing purposes, would make it difficult to obtain broad adoption of dynamic retail pricing. The Ohio Commission adds that such a requirement would be unreasonable as applied to small consumers and discriminatory when compared to non-price responsive consumers. The Ohio Commission notes that non-PRD loads are not subject to any performance testing and face no penalties, even when they exceed forecast levels and associated planning reserves.

49. With respect to PRD loads, the Ohio Commission argues that it is sufficient that these loads will be subjected to both higher peak retail prices and penalties, should they fail to meet their commitments when called. Accordingly, the Ohio Commission requests that PJM be required to interpret its proposed testing provision, Schedule 6.1(L), as authorizing only limited, statistical sampling of residential and small consumer responses and/or component testing of supervisory controls.

3. Post-Technical Conference Comments

50. The Ohio Commission reiterates its argument that PJM's proposed capability testing standard effectively, but inappropriately, imposes PJM's supply-side resource model on PRD and does so in a way that will undermine the ability of the vast majority of consumers to participate in the market. The Ohio Commission asserts that PJM's

[30] *See* proposed RAA at Schedule 6.1(L).

proposal will impose unnecessary, unreasonable, and unduly discriminatory interruptions of service on residential and small customers.

51. The Ohio Commission adds that this, or an equivalent service interruption, could be required under a testing procedure that treats PRD as if it were a supply-side resource. The Ohio Commission argues that the Commission should avoid discriminating against PRD, as compared to non-price responsive demand, and direct PJM to develop alternative procedures to test the capability of back-up supervisory controls.

4. Commission Determination

52. We accept PJM's proposal for testing of PRD loads when a Maximum Generation Emergency is not declared in a given delivery year. PJM states that the testing requirements in PRD are modeled on the requirements accepted by the Commission for capacity demand response.[31] With these requirements, then, PRD will have to meet the same testing standards as those applicable to capacity demand response. Testing will be for one hour only and will only occur when no Maximum Generation Emergency is called in a delivery year that requires the registered PRD to reduce. We believe this provision is reasonable and will ensure that PRD loads are capable of responding when needed.

53. We disagree with the Ohio Commission's argument that customers participating as PRD face discrimination compared to customers not participating in a demand response program. PRD customers can be distinguished from other loads because they are represented by the PRD provider as load that will be reduced to a specific demand level when the LMP is above pre-specified prices during emergencies.[32] Each of these end-use customers must also meet certain eligibility criteria to be included in a PRD provider's registration. Accordingly, customers participating as PRD are not comparable to customers that are not actively participating in demand response programs. In addition, small loads aggregated by a PRD provider are similar to small loads aggregated by a CSP to provide supply-side demand response. Thus, we find that holding them to a similar testing standard is also just and reasonable.

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[31] *See* PJM Answer at 15 (citing *PJM Interconnection, L.L.C.*, 126 FERC ¶ 61,275, at P 180 (2009)).

[32] RAA at Schedule 6.1, section E.

E. Dual Commitments of Loads as Demand Response

1. Proposed Tariff Revisions

54. PJM proposes to limit load's participating as PRD from participating in PJM's supply-side demand response programs, including energy market demand response programs. PJM states that, under its proposal, to prevent duplicative commitments of the same load reduction capability, loads registered as PRD will be barred from making commitments to simultaneously provide other demand response functions in the energy and capacity markets. Specifically, PJM states that for each delivery year that a load is identified as PRD, that load will be ineligible to be registered as a demand response resource in the energy markets (Economic Load Response or Emergency Load Response), or to be used as the basis for a capacity resource in any RPM auction, that is, as a demand resource or energy efficiency sell offer.

2. Intervenor Arguments

55. Viridity and PJM-ICC object to PJM's proposal to preclude a PRD load from participating in PJM's Economic Load Response program. PJM-ICC argues that PJM's proposal would deprive demand response that occurs at prices below those specified in the customer's PRD Curve, and outside of a Maximum Generation Emergency, from being compensated at the full LMP and, as such, violates Order No. 745 which requires participants in Economic Load Response Programs to be paid LMP under certain conditions.[33]

56. PJM-ICC proposes that PJM be required to modify its proposal to provide that customers will retain their eligibility to receive full LMP compensation for any demand response that these customers may provide when LMPs are below the prices specified in the PRD Curve. PJM-ICC notes that for many customers, the PRD Curve prices are likely to be higher than the LMPs at which the customer would be able to engage in demand response on a daily or hourly basis, if compensated at the full LMP. PJM-ICC adds PJM's proposal would foreclose legitimate opportunities for customers to engage in demand response with compensation set at this level.

57. In addition, Viridity argues that nothing in the PJM proposal precludes a second entity from registering the same loads to provide services such as energy, regulation, and synchronized reserve, to the extent that the load is able to reduce its consumption below its committed Maximum Emergency Service Level at times when there is no Maximum Generation Emergency. Viridity asserts that customers participating in PRD can choose to work with one PRD provider that has specialized expertise in developing and

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[33] *Demand Response Compensation in Organized Wholesale Energy Markets*, Order 745, FERC Stats & Regs. ¶ 31,322 (2011), *reh'g pending*.

implementing a PRD Plan, and separately work with a CSP that has specialized expertise in the energy and ancillary services markets. Viridity argues, however, that customers who participate in PJM's wholesale demand response programs effectively have no such choice.

3. PJM's Pre-Technical Conference Comments

58. PJM responds to the Commission's directive, in the December 14 Order, that PJM provide further explanation and support, in its pre-technical conference comments, for PJM's proposal that a PRD load should not be permitted to provide economic load response by lowering its consumption below its Maximum Emergency Service Level if such reductions could help balance supply and demand cost-effectively.

59. PJM states that allowing PRD to also provide Economic Load Response raises challenging implementation questions. PJM argues that if there is any overlap between the load offered as PRD and that offered as Economic Load Response, there can be significant adverse operational consequences and the dispatch efficiency and operational benefits that PRD otherwise offers the wholesale market could be significantly degraded. PJM also notes that it would be forced to dispatch software to incorporate logic that is exactly the opposite of normal economic dispatch, and reduce the energy market supply quantity offer to zero for a concurrent demand response/PRD resource in response to a price increase to the PRD Maximum Emergency Service Level price.

60. PJM states that were it to dispatch a customer in the energy market and were the LMP to subsequently reach a level triggering the customer's PRD obligation, the quantity of demand response provided by that customer in the energy market would drop to zero, contrary to the assumption regarding how sellers behave in a market. Furthermore, PJM argues that its proposed prohibition does not violate the LMP pricing requirement established by the Commission in Order No. 745.[34]

4. PJM's Post-Technical Conference Comments

61. PJM clarifies that under its proposal, end-use customer loads that are identified in one PRD Plan cannot also be identified, for the same delivery year, as PRD in another PRD Plan or registration, as a demand resource in an RPM auction, or as an emergency load response resource or economic load response resource.[35] PJM notes that allowing the same load to act both as PRD and supply-side demand response raises implementation issues such as how to define new baselines and distinct increments of a

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[34] *See* PJM Answer at 8 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 9).

[35] *See* proposed RAA at Schedule 6.1, section B.

customer's load, how to apportion performance responsibilities and charges for non-performance among different providers, and how to address sharing of information between CSPs that rely on the same customer. With respect to this proposal, PJM clarifies that, in theory, the same load would not be committed on both the demand and supply sides (and thus would not violate the underlying intent of PJM's proposed rule – a prohibition against dual commitments), provided that: (i) a distinguishable portion of a customer's load is clearly identified and separately committed as either PRD or as economic load response; and (ii) market rules are adopted that clearly distinguish between these separate increments of load and clearly apportion all associated responsibilities.

62. PJM adds, however, that its PRD proposal does not include these rules and that developing these rules could take considerable time. PJM asks that this matter be left to PJM and its stakeholders as a possible addition to PRD in the future.

63. In response to Viridity's request that supply-side demand resources be allowed to work with multiple CSPs, PJM contends that this request is beyond the scope of this 205 proceeding that addresses PRD rules.

5. Intervenor Post-Technical Conference Comments

64. Exelon agrees with PJM that various issues complicate any attempt to count the same demand reduction in more than one load response program, or reduce consumption below a load's Maximum Emergency Service Level. Exelon argues that should the Commission require such an accommodation, a stakeholder process will be required to determine the technical feasibility of any such arrangements.

65. Viridity/PJM-ICC reiterate their arguments, as summarized above, that PJM's proposed PRD program and existing economic load response program can and should coexist, without the need to exclude PRD customers from participating in the economic load response program.

66. Viridity/PJM-ICC challenge the premise underlying PJM's proposal, i.e., that the prohibition against participating in both PRD and the economic load response program is necessary to avoid double commitment of the same load reduction. Viridity/PJM-ICC acknowledge that while a load reduction dispatched in the energy market cannot satisfy a PRD obligation at the same time, PJM already has a means of preventing a double commitment of this sort. That is, when LMP at the PRD customer's location reaches the price at which the customer has committed to reduce load to its Maximum Emergency Service Level, the customer must satisfy that commitment and the customer's load must be withdrawn from the energy market for the entire time that the PRD commitment persists. Viridity/PJM-ICC argue, however, that at other times, when LMP is lower, there is no basis to prohibit the customer from offering its curtailments in the energy market.

67. Viridity/PJM-ICC also challenge PJM's assertion that an operational and market discontinuity would result were PRD customers allowed to participate in PJM's energy markets. Viridity/PJM-ICC explain that once the customer's PRD obligation is triggered, its curtailment does not disappear. Viridity/PJM-ICC states that, if the customer had reduced its load to the level of the Maximum Emergency Service Level after being dispatched by PJM in the energy market, nothing changes when the PRD obligation is triggered. Viridity/PJM-ICC argue that, similarly, no harm results if the customer had been curtailing load to a level that was above the Maximum Emergency Service Level, and no harm results if the customer had been curtailing load to a level that was below the Maximum Emergency Service Level.

6. PJM's Post-Technical Conference Reply Comments

68. PJM argues that if load were to switch from Economic Load Response to PRD, this 'flip over' to PRD would create discontinuities as supply-side DR disappears from the supply curve and would run counter to the fundamental economic logic that sellers increase their output with increasing prices.

69. PJM states that several of the technical issues would be resolved if loads looking to participate as both PRD and Economic Load Response would identify separate portions of their load to provide PRD and Economic Load Response. But, PJM argues that Viridity/PJM-ICC's proposal does not require this sort of separation to allow a load to serve as both PRD and Economic Load Response, thus creating the issues that PJM outlined in its initial response.

70. Further, PJM contends that the PRD proposal provides an additional demand response participation option and does not detract from a demand response participant's ability to continue to participate in the existing programs.

7. Commission Determination

71. We accept, subject to conditions, PJM's proposal to limit loads participating as PRD from participating in PJM's other demand response programs. We find that PJM adequately justified limiting the ability of loads to serve as both demand and supply-side demand resources. Participation in both programs, while perhaps technically feasible in the future, cannot be accomplished immediately due to the technical and market design issues PJM has identified. PJM also notes the complexity of accounting for a resource that switches between supply and demand. Specifically, PJM states that its dispatch algorithms cannot now accommodate on an automated basis the proposed "flip" from supply to demand.

72. We agree with PJM that allowing loads to provide dual commitments, at this time, without the appropriate market rules or software changes required to accommodate this allowance could potentially raise reliability or market concerns.

73. Without a specific proposal before us, moreover, we decline to prejudge these issues here. These issues, rather, should be considered first in PJM's stakeholder process. PJM states that it "would accept a Commission directive that PJM work with its stakeholders to develop rules that clarify, establish, and as necessary limit, how an end-use customer can be the basis for Economic Load Response offers during the same delivery year that it is the basis for a PRD commitment, and to file such rules within nine months after the Commission's order on the PRD Filing."[36] Accordingly, we accept PJM's proposal to work with its stakeholders to develop necessary rules and submit a tariff proposal within nine months of the date of this order, allowing for load registered as PRD to participate as a demand response resource in PJM's energy markets, or in the alternative we direct PJM to make an informational filing apprising the Commission of its progress on the issue.

74. Finally, we reject Viridity's request that supply-side demand resources be allowed to work with multiple CSPs as beyond the scope of the proceeding. This filing is focused on the integration of PRD into PJM's markets, and does not touch on the restrictions facing CSPs providing supply-side demand response.

F. Automation and Supervisory Control

75. The Commission, in the December 14 Order, found that PJM's proposal regarding automation and supervisory control had not been supported and required further exploration at the technical conference.[37] The December 14 Order also directed PJM to describe and explain, in its pre-technical conference comments, the anticipated participation of energy-only PRD, including the requirements regarding automation.

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[36] *See* PJM Answer to Answers at 4.

[37] *See* proposed RAA at Section 1.71F:

> [PRD is] end-use customer load registered by a PRD Provider . . . that [has] . . . the metering capability to record electricity consumption at an interval of one hour or less, supervisory control capable of curtailing such load . . . at each PRD Substation identified in the relevant PRD Plan or PRD registration in response to a Maximum Generation Emergency declared by [PJM], and a retail rate structure, or equivalent contractual arrangement, capable of changing retail rates as frequently as an hourly basis, that is linked to or based upon changes in real-time [LMPs] at a PRD Substation level and that results in a predictable automated response to varying wholesale electricity prices.

1. PJM's Pre-Technical Conference Comments

76. PJM states that its proposed automation requirement is designed to ensure that anticipated load reductions are realized. PJM explains that just as efficiency can be gained by incorporating PRD into the PJM real-time dispatch and pricing algorithms when that PRD responds consistently with the information provided to PJM, such efficiency could be lost if PJM dispatches the system based on an expectation of price sensitive retail load that does not respond as indicated. PJM states that, as such, automation of the load's reaction to price is needed regardless of whether a capacity commitment exists.

77. PJM adds that, with PRD, PJM will adjust its short-term load forecast in the energy market to reflect lower load at particular price points, based on the submitted PRD Curves.[38] PJM states that it will then dispatch less supply to maintain power balance, while respecting active transmission constraints between supply and the anticipated load. PJM states that its proposed automation requirement will help ensure that PJM will, in fact, realize the benefits of PRD by incorporating price-sensitive retail load in the dispatch in a manner that is both efficient and reliable.

2. Commission Determination

78. We accept PJM's automation and supervisory control proposal, subject to conditions. Under PJM's proposal, a PRD resource is subject to PJM's supervisory control and automation requirements. However, the relevant provisions of PJM's tariff, as proposed, do not adequately define either of these terms. Accordingly, we require PJM to submit, in its compliance filing, tariff language addressing this matter.

G. Formula for Determining PRD Credit

79. In the December 14 Order, the Commission identified the funding of the PRD Credit as an issue that required further exploration at the staff technical conference. The Commission further directed that PJM be prepared to demonstrate, preferably with an example, that the Locational Reliability Charge will fully fund the PRD Credit.

1. PJM's Pre-Technical Conference Comments

80. PJM states that to compensate supply and PRD that was committed in the capacity auctions, PJM must determine the final zonal capacity price that provides for total load charges that equal the total supply resource credits plus the PRD Credit. PJM recognizes that this funding mechanism will necessarily result in a final zonal capacity

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[38] PRD Curves are a form of price sensitive demand curve, meaning a demand curve where consumption varies according to wholesale prices.

price that is greater than the auction clearing price. PJM states that, nonetheless, the PRD Credit offsets the increased final zonal capacity price and puts the LSE in the same position as if PJM had instead proposed to directly reduce the LSE's capacity obligation by the amount of PRD committed. However, while PJM proposes to utilize a formula in its tariff to calculate the PRD Credit, it does not propose a formula to account for PRD charges to the LSE and the related revisions to the calculation of the final zonal capacity price.

2. Commission Determination

81. We accept PJM's proposed funding for the PRD Credit, subject to conditions. From its examples, PJM has shown that it will calculate a final zonal capacity price that assesses capacity charges to LSEs in an amount sufficient to pay supply and PRD committed through the capacity auctions. As PJM explains, the additional charges created by PRD will be fully offset by the PRD Credit. For PRD committed in the base residual auction, PJM demonstrates that it will use the final zonal capacity price to calculate the charges/credits for LSEs/PRD providers. Thus, the charges/credits to LSEs/PRD providers result in zero net charges for the committed PRD.

82. We find that this same principle should apply to the charges and credits for PRD committed in the third incremental auction. However, PJM does not provide an example of the charges assessed to LSEs for PRD commitments in the third incremental auction. Because PJM proposes in its filing that PRD Credits for the third incremental auction be calculated by applying only a percentage of the final zonal capacity price,[39] it stands to reason that charges for that PRD should be calculated by applying that same percentage. Because PJM has not proposed a mechanism for assessing PRD charges to LSEs in the tariff, we conditionally accept PJM's filing, subject to PJM revising its tariff to include the methodology it will use to impose charges on LSEs for PRD committed in the base residual auction and the third incremental auction.

H. Additional Issues

1. Coordination With Shortage Pricing

83. Exelon urges the Commission to enhance the benefits attributable to PJM's proposal by requiring PJM to provide a pricing mechanism that allows market prices for

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[39] *See* proposed RAA at Schedule 6.1, section G.

energy to rise gradually to reflect the actual value of energy during periods of shortage.[40] We find this request to be outside the scope of this proceeding.

2. Retail Rate Effects

84. American Municipal Power, Inc. (AMP) requests clarification that PJM's PRD proposal will not allow a PRD provider to effectively alter retail rates through the use of a wholesale tariff. In addition, the Ohio Commission requests clarification that, under PRD, states will possess the authority to exclude, or limit, retail load's ability to acquire PRD service under PJM's OATT.

85. We see no reason for further clarification. As AMP acknowledges, PJM's proposal requires that any contract between a PRD provider and the relevant end-use customer establishing a time-varying retail rate structure conform with the Relevant Electric Retail Rate Authority's requirements. This requirement preserves and does not otherwise interfere with the jurisdictional authority of retail regulators.

3. Zonal LMP

86. AMP requests clarification that retail load, registering as PRD with customer-specific nodal price point, will not operate to alter or convert the LSE's reliance on a differing, aggregate nodal price, or zonal LMP. AMP argues that PRD should not be permitted to alter the LMP definitions of an LSE's load.

87. PJM provides clarification on this matter. In its answer, PJM clarifies that: (i) an end-use customer of an LSE can be registered as PRD at a substation at an LMP node that differs from the LSE's designation of its pricing point (which often is an aggregate combining multiple LMP nodes); (ii) the PRD pricing point designation will not change the LSE's pricing point designation; and (iii) the triggering of the PRD could, however, change the price and load at the relevant substation, which (assuming that node is part of the aggregate) could in turn affect the calculation of the aggregate LMP for the LSE.[41]

4. Consolidation of PJM's Demand-Side Programs

88. P3 argues that, while PRD is the "ultimate solution" to demand response participation in PJM's capacity markets, adding yet another demand response program, as PJM proposes, without planning for a transition from PJM's existing supply-side demand

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[40] *See also* PJM Power Providers Group (P3) comments at 6 (arguing that a meaningful scarcity pricing regime to recognize the full value of PRD can further improve the vitality of PJM's markets).

[41] *See* PJM Answer at 19.

response programs, will promote confusion and inefficiency.[42] P3 proposes, instead, that PJM be required to transition to a single, demand-side method for load to participate in the capacity market, in other words, a full reliance on PRD. P3 argues that the absence of a transition plan threatens the development of Advanced Metering Infrastructure.

89. P3 adds that a transition to a single demand-side mechanism to recognize curtailments in capacity planning will eliminate substantial confusion and discord about the measurement of demand side resources to accommodate their participation as supply-side capacity resources. P3 further notes that, absent a transition plan, the addition of PRD to the suite of supply of existing demand response programs will require PJM to increasingly rely on customer curtailments.

90. PSEG Companies (PSEG) argues that the current treatment of demand response resources in PJM will deter PRD participation. PSEG notes that demand response facilities that participate as capacity resources have lower capital requirements than PRD and, because they are usually only called during emergency conditions, have fewer operational responsibilities than PRD. PSEG asserts that, as such, PJM's proposal fails to ensure that PRD will be the ultimate solution to demand response participation in PJM's markets.

91. We find that these suggestions go beyond the limited scope of this filing and would operate to revise existing PJM tariff provisions not before us. As P3 acknowledges in its comments, three of PJM's four demand-side programs are new and thus largely untested. It is not only premature to identify one approach as superior to the others, but would also be premature to restrict options for consumers to participate in demand response activity to only one type of demand-response program. In fact, it may prove the case that certain loads can only, in practice, provide one form of demand response. As it stands, more time and experience with these evolving demand-side programs and market approaches remains warranted.

5. Coordination between PRD Providers and LSEs

92. Exelon argues that there would be technical complications performing accurate demand forecasting and making appropriate day-ahead and real-time market data submissions for customers with independent LSE and PRD providers, given that non-LSE PRD providers are not required to submit a day-ahead PRD Curve. Exelon asserts that without information about PRD commitments from non-LSE PRD providers, LSEs would not necessarily have accurate information to schedule correct energy use. Exelon further asserts that if LMPs were high enough that a customer curtailed its usage using PRD, the LSE would be over-scheduled, subject to both day-ahead and real-time price differences and to market uplift charges for deviations from its day-ahead schedule.

[42] *See also* PSEG Comments at 5.

Exelon concludes that the daily interactions required, as between a customer's LSE and the PRD provider, warrant and make necessary a level of coordination and information sharing that would be best achieved through bilateral contractual arrangements.

93. Exelon argues, in the alternative, that should the Commission require PJM to issue PRD Credits directly to the PRD provider, assurances should be provided that the LSE is given sufficient timely information regarding all load reduction commitments that may be made, including but not limited to the supply of PRD schedules. Further, Exelon asserts that non-LSEs should be financially responsible for all charges associated with deviations from those schedules. Exelon argues that without these requirements, the Commission should preclude non-LSE participation in PRD.

94. We agree that the PRD program would be enhanced if estimated load reductions in response to wholesale prices provided through non-LSE PRD providers were reflected in both PJM's day-ahead and real-time energy markets. PJM should work to develop rules to allow appropriate information sharing through its stakeholder process, and provide the related tariff changes in a compliance filing within six months of the date of this order. Allowing non-LSE PRD providers to submit PRD Curves in the day-ahead market would improve reliability and the economic efficiency of PJM's markets. PJM may develop rules aimed at creating robust coordination between non-LSE PRD providers and LSEs, as proposed by Exelon, or rules that allow PJM to distinguish an LSE's loads working with a non-LSE PRD provider from the LSE's other loads to avoid two different groups estimating demand in the day-ahead market for the same load. PJM may also consider rules allowing for the deviation charges to be assessed to non-LSE PRD providers.

<u>The Commission orders</u>:

(A) PJM's proposed tariff revisions are hereby accepted, effective May 15, 2012, subject to conditions, as discussed in the body of this order

(B) PJM is hereby directed to submit four compliance filings, within (i) 60 days of PJM's release of the results of PJM's May 2014 base residual auction results; (ii) 60 days of the date of this order; (iii) six months of the date of this order; and (iv) nine months of the date of this order, as discussed in the body of this order.

By the Commission. Chairman Wellinghoff concurring with a separate statement to be issued at a later date.

(S E A L)

Kimberly D. Bose,
Secretary.