Before Commissioners: Cheryl A. LaFleur, Acting Chairman; Philip D. Moeller, John R. Norris, and Tony Clark.

PJM Interconnection, L.L.C. Docket Nos. ER14-822-000 ER14-822-001

ORDER REJECTING, IN PART, AND ACCEPTING, IN PART, PROPOSED TARIFF CHANGES, SUBJECT TO CONDITIONS

(Issued May 9, 2014)

1. On December 24, 2013, PJM Interconnection, L.L.C. (PJM), submitted revisions to the PJM 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).\(^1\)

2. PJM states that its proposed revisions are intended to promote operational flexibility and efficiency by: (i) treating all demand response that participates in PJM’s capacity market as Pre-Emergency Load Response, absent a showing that the demand response resource meets its capacity obligations by utilizing behind-the-meter generation that is subject to strict environmental regulation; (ii) requiring, on a phased-in basis, that all demand response perform within 30 minutes of notification, unless a demand response resource has requested (and PJM has granted) one of four specified exemptions, as discussed below; (iii) limiting the duration of the required minimum load response reduction period from two hours to one; (iv) establishing revised demand response offer price caps, as set at a level that recognizes both the varying response time commitments, as made by these demand response resources, and their value when deployed in advance of a shortage pricing event; and (v) authorizing PJM, on a phased-in basis, to require

\(^1\) 16 U.S.C. § 824d (2012). Appendix A to this order lists the tariff sections filed by PJM.
compliance with a sub-zonal dispatch directive, for sub-zones designated inside the operating day.

3. For the reasons discussed below, we reject, in part, and accept, in part, PJM’s proposed tariff changes subject to conditions and the submission of a compliance filing, to become effective March 15, 2014, as requested.

I. **Background**

4. PJM states that, under its existing rules, a demand response resource, participating in PJM’s Emergency Load Response Program, can only be required to reduce its load when PJM has initiated emergency procedures. PJM adds that virtually all of the demand response currently registered with PJM as a capacity resource (including 94 percent of the MWs nominated for the 2013-14 delivery year) have opted for a two-hour notification time, which means that these demand response resources are not required to achieve their full load reduction until two hours after PJM issues a notice that Emergency Load Response is needed. PJM adds that, thereafter, PJM is not permitted to reverse its call until at least two hours after a demand response resource has achieved its full load reduction regardless of whether the emergency conditions giving rise to the initial call remain in effect.²

5. PJM states that when a demand response resource is given up to two hours to achieve its full load reduction, PJM’s dispatchers are required to call on that demand response resource at a time when forecasted system conditions are still in flux. PJM states that, consequently, its dispatchers often call on more demand response than is required to meet PJM’s reliability needs.

6. PJM notes, for example, that on two occasions (on July 18, 2013 and September 11, 2013) its dispatchers called on demand response when system conditions gave rise to the expectation that PJM was facing emergency conditions. PJM states that on both occasions these emergency conditions failed to materialize. PJM asserts that it was prohibited from reversing its dispatch directives prior to the expiration of the currently-effective minimum load response notice period. PJM asserts that such a practice is not appropriate because it can result in PJM’s dispatchers backing down more cost-effective generation. PJM adds that, on the aforementioned days, PJM was required to pay millions of dollars in make-whole payments to compensate demand response resources that were not, in fact, required.

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² See PJM Operating Agreement at Schedule 1, section 8.8, and the parallel provision of the PJM OATT at Attachment K-Appendix.
7. PJM concludes that its existing rules have created operational inefficiencies, due to PJM’s current inability to call on demand response without first initiating emergency procedures, and PJM’s current inability to call on these demand response resources in a more precise, targeted manner.

8. To address these asserted inefficiencies, PJM proposes to create a new capacity demand response product, i.e., Pre-Emergency Load Response, as described more fully below and require all demand response capacity resources, except aforementioned behind the meter generation resources, to participate as Pre-Emergency Load Response resources. PJM requests that most of its proposed tariff changes be made effective March 15, 2014. PJM proposes a one year transition for two elements of its proposal (i.e., default 30-minute notification lead time, and mandatory within-day sub-zonal dispatch, each discussed below) with implementation of those provisions commencing with the 2015-16 delivery year.

II. Notice of Filing and Responsive Pleadings

9. Notice of PJM’s filing was published in the Federal Register, 78 Fed. Reg. 40,230 (2013), with interventions, comments, or protests due on or before January 14, 2014. Notices of intervention and timely-filed motions to intervene were submitted by the entities noted in Appendix B to this order.³

10. Protests and/or comments were submitted by Monitoring Analytics, LLC, PJM’s independent market monitor (Market Monitor); Exelon Corporation (Exelon); the Electric Power Supply Association (EPSA); Nucor Corporation and Steel Dynamics, Inc. (Steel Producers); American Electric Power Service Corporation⁴ (AEP, et al.); the PJM Power Providers Group (P3); EnergyConnect, Inc. and Comverge, Inc. (EnergyConnect, et al.); PSEG Companies (PSEG); EnerNOC, Inc., Hess Energy Marketing, LLC, and Direct Energy Business, LLC (EnerNOC, et al.); the Maryland Public Service Commission (Maryland Commission); NRG Companies (NRG); the Public Utilities Commission of Ohio (Ohio Commission); the Joint Consumer Advocates;⁵ the PJM Industrial Customer Coalition (Industrial Customer Coalition);

³ The abbreviated names and/or acronyms by which these entities are referred to in this order are also noted in Appendix B.

⁴ AEP is joined by The Dayton Power and Light Company, FirstEnergy Service Company, and Duke Energy Ohio, Inc.

⁵ The Joint Consumer Advocates are comprised of the following entities: the Pennsylvania Office of Consumer Advocate and the Maryland Office of People’s Counsel.
PHI Companies (PHI), and the Indiana Utility Regulatory Commission (Indiana Commission).


III. Deficiency Letter

12. On March 6, 2014, a Deficiency Letter was issued seeking additional information regarding, among other things: (i) PJM’s proposed pre-emergency procedures; (ii) demand resource notification times; (iii) offer price stratification; (iv) dispatch of demand response resources; and (v) day-ahead sub-zonal dispatch requests. PJM filed its response to the Deficiency Letter on March 12, 2014, as summarized below.

13. Notice of PJM’s Deficiency Letter responses was published in the Federal Register, 79 Fed. Reg. 8672 (2014), with interventions, comments, or protests due on or before March 24, 2014. Comments and/or protests were filed by EnerNOC, et al., EnergyConnect, et al., and the Market Monitor, as summarized below. PJM submitted an answer to protests and comments on March 31, 2014.

IV. Procedural Matters

14. Pursuant to Rule 214 of the Commission’s Rules of Practice and Procedure, the timely-filed notices of intervention and timely-filed, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

15. Rule 213(a)(2) of the Commission’s Rules of Practice and Procedure prohibits an answer to a protest unless otherwise ordered by the decisional authority. We will accept the answers submitted by EPSA, PSEG, AEP, et al., the Maryland Commission, Exelon, P3, PJM, EnergyConnect, et al., EnerNOC, et al., the Maryland Commission, PHI, and Exelon because they have provided information that has assisted us in our decision-making process.

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V. Discussion

16. For the reasons discussed below, we reject, in part, and accept, in part, PJM’s proposed tariff changes, subject to conditions and the submission of a compliance filing, within 30 days of the date of this order to become effective on March 15, 2014, as requested.

A. Pre-Emergency Load Response

1. PJM’s Proposal

17. PJM proposes to create a new demand response capacity product, i.e., Pre-Emergency Load Response, giving PJM the ability to require load reductions, as necessary, under both emergency and pre-emergency conditions.\(^8\) PJM states that Pre-Emergency Load Response will be eligible to participate in PJM’s capacity auctions and will be eligible for PJM dispatch before an emergency is called, subject to the proposed requirements and conditions summarized below.

18. PJM proposes to require that all demand response submitting a sell offer into PJM’s capacity auctions be considered Pre-Emergency Load Response, unless that resource: (i) meets its load reduction obligations through behind-the-meter generation; which (ii) is subject to environmental restrictions restricting its operation to periods when PJM is in emergency conditions. PJM states that it will dispatch Pre-Emergency Load Response in a manner comparable to its dispatch of Emergency Load Response, but will do so subject to consideration of the resource’s strike price. PJM also clarifies that Pre-Emergency Load Response will be eligible to set the Locational Marginal Price, when required to reduce demand, just as Emergency Load Response is currently eligible to do.

2. Protests and Comments

19. The Ohio Commission and the Indiana Commission agree with PJM that the availability of Pre-Emergency Load Response will allow PJM to more efficiently and cost-effectively respond to changing system conditions. The Indiana Commission asserts that while the effects of PJM’s proposed revisions on retail tariffs and contracts remains unclear (and warrants review going forward), the rule changes will be generally beneficial, given that they will both decrease costs and promote reliability. The

\(^8\) PJM proposes to initiate a pre-emergency event prior to the declaration of an emergency, or the occurrence of an emergency event, when practicable. PJM states that a pre-emergency event will be implemented when economic resources are not adequate to serve load and maintain reserves, or maintain system reliability.
Ohio Commission adds that utilizing demand response during pre-emergency conditions will allow capacity demand response resources to operate in a way that is more closely aligned with capacity generation resources.\textsuperscript{9}

20. The Joint Consumer Advocates argue that while PJM’s proposed revisions may have the effect of reducing uplift payments to demand response resources (an asserted benefit), PJM’s filing remains unsupported, given PJM’s failure to provide a full costs/benefits analysis.\textsuperscript{10} The Joint Consumer Advocates note, for example, that under PJM’s proposal, added burdens and lower revenues will be borne by curtailment service providers and consequently, if these entities exit the market, an overall increase in system capacity costs could be the result.

21. Exelon requests that PJM be required to modify the scope of a pre-emergency event to clarify that a pre-emergency notice may be provided at any time, including notification prior to the operating day, when economic resources are expected to be inadequate. Exelon notes that such a clarification would allow for more effective and timely communication, as between the curtailment service provider and its end-use customers, and thus promote more efficient planning and management of a load response event. Exelon also requests that PJM be required to define, in its tariff, the capitalized terms “Pre-Emergency Load Response Program” and “Emergency Load Response Program.”

22. Steel Producers argue that PJM’s proposal inappropriately eliminates the ability of demand response to participate in PJM’s capacity market on an emergency-only basis, and that it gives PJM the ability to call on demand response resources, before they have exhausted all available economic resources, and in a manner not solely based on price. Steel Producers assert that PJM should be required to take a more incremental approach to making changes it deems necessary.

23. Exelon objects to PJM’s proposal to exempt from the class of resources that will be treated as Pre-Emergency Load Response a resource that: (i) meets its load reduction obligations through behind-the-meter generation; and (ii) is subject to environmental restrictions limiting its operation to emergency conditions. Exelon asserts that PJM’s proposed exemption may be unduly discriminatory. Exelon further asserts that PJM’s proposal may encourage generators to enter the market as behind-the-meter demand

\textsuperscript{9} See also EPSA comments at 4 (arguing that PJM’s proposal, adopting a default 30-minute notification time and reducing the minimum load management event duration time from two hours to one, will allow PJM to better respond to rapidly changing conditions and thus better ensure system reliability).

\textsuperscript{10} See also Maryland Commission protest at 2-3.
response resources, thus enabling these resources to take advantage of PJM’s market without bearing the burdens required of other capacity resources, including market mitigation and testing requirements.\textsuperscript{11}

24. P3 also asserts that PJM’s proposed rule change will create a perverse incentive for demand response to enter as behind-the-meter generation. PSEG adds that PJM has not established that the capacity market could not incent new generator or demand response resources to offset any loss of uncontrolled diesel-fired behind-the-meter generators.

25. NRG argues that all demand response resources should be treated equally and that it should not matter whether the demand response resources are behind-the-meter (like diesel generators) or in front (like load shaving resources). NRG argues that demand response resources should be required to participate in the market on an economic basis. NRG asserts that PJM’s proposal, by contrast, will allow only certain behind-the-meter generators subject to environmental limitations to participate in the Emergency Load Response program.

26. EPSA argues that categorizing behind-the-meter generation as demand response displaces cleaner traditional power generation resources. EPSA asserts that, if behind-the-meter generation wishes to participate in PJM’s capacity auctions, it should be subject to the same environmental standards as conventional generation. EPSA notes that, at a minimum, PJM should be required to demonstrate that such behind-the-meter generation is needed for a reliability reason and that it represents the most economical solution.

27. Finally, EnerNOC, \textit{et al.} requests that PJM’s proposed changes, if accepted, should be made effective on a transitional basis that honors commitments made in PJM’s capacity market auctions in reliance on PJM’s existing rules. EnerNOC, \textit{et al.} argue that the single year transition proposed by PJM, with respect to its lead-time and sub-zonal proposals as discussed in sections V.B and V.G of this order, below, is not sufficient.

3. \textbf{PJM’s Answer}

28. PJM, in its answer, argues that its proposed Pre-Emergency Load Response product provides a reasonable incremental enhancement to demand response dispatch flexibility. PJM argues that its proposed rules will allow PJM to \textit{better} use demand

\textsuperscript{11} See also Market Monitor comments at 5 (arguing that each rationale offered by PJM in support of a pre-emergency demand response classification applies equally to behind-the-meter generation).
response resources for the type of system support they have always been intended to provide, notwithstanding the solutions proposed by the Market Monitor and others.

29. PJM argues that Steel Producers’ concerns are based on two false premises, one the assumption that the status quo must be retained and two, the assessment that PJM’s proposal will fundamentally change the nature of PJM-required load reductions. PJM argues that the changed circumstances outlined in its filing (the growth in demand response) warrant its proposed tariff changes. PJM further argues that its proposed changes represent an incremental change, not a fundamental reordering of its capacity market.

30. PJM also responds to intervenors’ objections, regarding PJM’s proposal to limit the resources eligible to provide emergency load response to those demand response resources that use behind-the-meter generation to meet their demand response obligations and that have strict environmental restrictions on when they can operate. PJM argues that intervenors’ concerns are, in fact, directed at an ancillary cause not at issue here, i.e., to the underlying air quality rules that allow certain behind-the-meter generators to operate without emissions controls under certain emergency conditions. PJM argues that this proceeding is not the appropriate forum to re-litigate these issues.

31. PJM also responds to intervenors’ request that PJM be required to establish a must-offer requirement for demand response, as that requirement currently applies to generation capacity resources. Such a must-offer requirement would entail an obligation to offer the available capacity of their resources every day into PJM’s day-ahead energy market. PJM argues, however, that there has been no showing made here that the relevant provisions of its Operating Agreement, addressing demand response participation, are unjust and unreasonable.

4. Deficiency Letter Responses

32. PJM was asked to compare and contrast its current emergency procedures with those it proposes to use for Pre-Emergency Load Response. In its response, PJM states that its existing procedures for emergency events consist of a series of alerts, warnings and actions that are issued prior to and during those emergency events. PJM adds that these actions may be taken within, or prior to, the operating day and may require the declaration of multiple emergency procedures. PJM states that, by contrast, Pre-Emergency Load Response would not require the use of emergency procedures, or the issuance of an energy emergency alert. PJM states, however, that to provide as much notice as possible of both pre-emergency and emergency events, PJM intends to revise its manuals, at Manual M-13, sections 2 and 5, to include a new alert designation, i.e., a Maximum Emergency Generation/Load Management Alert.
33. PJM was then asked to compare and contrast its existing dispatch procedures for capacity resources with the dispatch procedures it would apply to Pre-Emergency Load Response. PJM responds that, currently, capacity generation resources must submit offers into the day-ahead market, with each such offer (regardless of whether the resource is committed day-ahead) used by PJM in the real-time market to make commitment and dispatch decisions, based on the applicable costs and operating parameters. Under its proposal, PJM will deploy Pre-Emergency Load Response using the same methodology used to deploy emergency load management but without initiating any emergency procedures.  

34. With respect to the Deficiency Letter’s inquiry into PJM’s proposed dispatch criteria, based on factors other than price, PJM responds that the demand response resource’s availability to curtail is the most important factor examined, and quantity and location may also play significant roles in how demand response is deployed. PJM notes that the amount of Emergency Load Response in relation to the quantity of load reduction needed in a single zone is also relevant when the quantity of load reduction needed is less than the amount available in the affected area. PJM further states that notification time may also be a factor and that there may be scenarios when PJM needs to deploy Emergency Load Response in a more timely manner than the two-hour, long lead time would permit.

5. **Protests and Comments**

35. The Market Monitor responds to PJM’s explanation, describing the non-price factors that PJM may consider in dispatching Pre-Emergency Demand Response. The Market Monitor argues that PJM fails to provide transparent criteria and thus fails to provide an economic and auditable approach for dispatch.

6. **Commission Determination**

36. For the reasons discussed below, we accept PJM’s proposed Pre-Emergency Load Response product, subject to the conditions outlined in this order. For the reasons discussed below, we find that PJM’s proposal, as conditioned, establishes a just and reasonable product definition that will allow PJM to more efficiently and cost-effectively integrate capacity demand response resources into its markets.

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12 PJM adds that, similar to its existing rules, as applicable to Emergency Load Response, Pre-Emergency Load Response will be required to submit an annual offer, i.e., a strike price, to be used by PJM in setting prices and making dispatch decisions.
37. The Joint Consumer Advocates assert that PJM’s proposal is unsupported because PJM failed to conduct a cost/benefit analysis. They argue that PJM should have assessed whether the benefit of having more dispatchable demand response is outweighed by the increase in capacity costs that may result if existing demand response exits the market as a result of PJM’s proposal that imposes increased performance requirements on demand response. We disagree with Joint Consumer Advocates that such an assessment is necessary or that the absence of this assessment renders PJM’s proposal unjust and unreasonable. The appropriate question is not whether demand response participation in PJM’s capacity market will increase or decrease due to increased performance requirements, but whether the new Pre-Emergency Load Response product is just and reasonable. We find that it is, and agree with PJM that its proposal to create, and reclassify most demand response resources as Pre-Emergency Load Response will allow PJM to dispatch demand response resources in a cost-effective and efficient manner, resulting in just and reasonable market outcomes.

38. Steel Producers argue that PJM’s proposal is unjust and unreasonable because it allows demand response resources to be dispatched before the system has run out of economic resources, and are not solely dispatched based on price. As PJM points out, demand response makes up a growing portion of PJM’s capacity resources and while it is a useful resource, it is reasonable for PJM to seek some added flexibility to dispatch these resources in response to system conditions, without the added step of declaring a system emergency. We agree with PJM that this proposal is an incremental change that provides PJM dispatchers more flexibility and allows for a more efficient dispatch of such resources, without going so far as to require that all demand response resources be dispatched economically.

39. Intervenors argue that demand response resources should be dispatched economically. However, PJM’s proposal simply defines a new product, Pre-Emergency Load Response, to give it more flexibility to dispatch demand response resources in advance of a potential emergency situation, which it has persuaded us will allow for a more efficient and cost-effective use of such resources. Intervenors’ request that these resources be fundamentally reclassified as economic resources is beyond the scope of this proceeding. In any event, as discussed elsewhere, we find that PJM has adequately demonstrated that its proposal is just and reasonable, subject to conditions.

40. Similarly, the Market Monitor argues that, in the absence of daily economic offers, PJM’s dispatch procedure will not be auditable. Under PJM’s proposal, however, there will be greater variability in both the distribution of these strike prices and notification times for capacity demand response resources than under the current rules. We do not see how this variability will make their dispatch process any less auditable than it already is. However, to increase the transparency of PJM’s actions, we accept PJM’s filing, subject to the condition that PJM submit a report to its stakeholders, after one year of
operation under its revised rules describing the distribution of strike prices and notification times for demand response resources and how PJM handled their dispatch.

41. With respect to PJM’s proposed exemption for demand response resources supported by behind-the-meter generation, we are concerned that PJM has not adequately demonstrated that all such behind-the-meter generation resources are, in fact, categorically prohibited from operating during pre-emergency conditions, and instead are restricted only to operating during emergency events. To the extent that this exemption is overbroad, it may improperly allow these resources to take advantage of PJM’s market without satisfying the obligations required of other capacity demand response resources. Thus, we accept PJM’s proposal to establish the Pre-Emergency Load Response Program, subject to the condition that PJM submit a compliance filing within 30 days to either: (i) justify the need for, and scope of, its proposed exemption, including any necessary revisions to its Tariff to ensure that the exemption is properly tailored to the environmental restrictions imposed on these units, or (ii) remove the exemption for behind-the-meter demand response resources from its tariff.

42. Exelon requests that PJM modify the scope of its Pre-Emergency Load Response Program to allow PJM to declare a Pre-Emergency event the day before the operating day. This request goes beyond the scope of PJM’s section 205 filing and Exelon has not argued that PJM’s filing is unjust and unreasonable and should be rejected. PJM’s proposal is designed to provide PJM greater flexibility to dispatch demand response resources closer to a projected emergency event, not farther from it. Accordingly, we are not persuaded that Exelon’s request for relief is required, given the goal of the Pre-Emergency program.

43. Finally, we agree with Exelon that PJM’s proposed terms “Pre-Emergency Load Response Program” and “Emergency Load Response Program” should be defined in PJM’s tariff. Accordingly, we accept PJM’s filing, subject to the condition that PJM submit a compliance filing that defines these terms in the Tariff.

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13 For example, it appears that, under the Environmental Protection Agency’s rules governing stationary internal combustion engines, such engines may run during pre-emergency periods for up to 50 hours each year. Environmental Protection Agency, Stationary Internal Combustion Engines, available at http://www.epa.gov/ttn/atw/icengines/.
B. Notification Requirements

1. PJM’s Proposal

44. PJM proposes to modify, on a phased-in basis (i.e., following a one-year transition period), the notification period a demand response resource will receive before it must provide its load reduction.\(^{14}\) Specifically, PJM proposes that, when called upon to reduce load, all Emergency and Pre-Emergency Load Response be required to achieve a full load reduction within 30 minutes, unless the demand response resource is eligible for an exception addressed in section V.C of this order. PJM states that, under its phase-in proposal, this requirement will become effective for those registrations made for the 2015-16 delivery year.

2. Protests and Comments

45. The Market Monitor generally concurs with PJM that for demand response to operate as a substitute in the capacity market, it is essential that demand response resources be required to respond rapidly when called. The Market Monitor argues that a 30-minute notification time is the maximum reasonable parameter for demand response customers that cannot reduce demand more quickly.

46. NRG characterizes PJM’s proposal as an inappropriate one-size-fits-all approach, in contrast to the rules that apply to generation resources.\(^{15}\) NRG argues that, in lieu of PJM’s proposal, PJM should be required to allow demand response customers to set appropriate response times, between 30 minutes and two hours.\(^{16}\) NRG argues that should the Commission accept PJM’s proposal, it should also recognize that a mandatory change in notification times is a significant change for many resources and needs to be phased-in gradually. NRG further argues that, in the event the Commission accepts PJM’s proposal, PJM should be required to clarify that the exemptions upon which a demand response resource can rely, to show that it is reasonably expected to be

\(^{14}\) See proposed PJM OATT at Attachment DD-1, section A.2, and the corresponding proposed provisions of the RAA at Schedule 6.

\(^{15}\) NRG notes, for example, that the start times of traditional generators supplying capacity within the NRG fleet range from under five minutes to twenty-four hours, depending on the technology employed by each specific resource.

\(^{16}\) See also Steel Producers protest at 5 (arguing that demand response resources should be permitted to make their own market-based decisions, when it comes to response times).
physically unable to reduce load in the 30-minute timeframe, include process limitations on customer notifications for commercial and industrial customers.

47. The Industrial Customer Coalition argues that PJM’s proposed 30-minute load response requirement violates the filed rate doctrine, given the reliance placed by curtailment service providers on PJM’s existing rules at the time that these entities’ resources cleared in PJM’s capacity auctions. The Industrial Customer Coalition asserts that, if a curtailment service provider has taken a market position based on a 60- or 120-minute notification period requirement (i.e., based on PJM’s existing rules), those market rules must remain in effect for the relevant delivery year.

48. EnergyConnect, et al. argue that, in the event the Commission determines that a default notification period is required to achieve PJM’s reliability goals, PJM should be required to adopt a one-hour notification period. EnergyConnect, et al. and EnerNOC, et al. argue that PJM’s proposed 30-minute notification period would not permit a demand response resource, including a manufacturing plant, to consider commercial or other impacts associated with PJM’s proposed lead time. EnerNOC, et al. argue that, under PJM’s proposal, existing demand response customers will exit the market, thus raising capacity prices. EnerNOC, et al. adds that PJM’s proposed requirement is unnecessary, given that PJM’s proposed offer price stratification\(^\text{17}\) would sufficiently incentivize demand response resources to submit the shortest lead time with which they reasonably believe they can reliably comply. EnergyConnect, et al. encourage the Commission to direct PJM to consider a mechanism to provide a market incentive to respond in 30 minutes, such as through a reserve payment approach.

3. PJM’s Answer

49. PJM responds to intervenors’ argument that PJM’s proposal will prevent valuable resources from participating in the market, thus increasing the risk of higher capacity prices. PJM argues that it provides notice through alerts and warnings, beginning the day before an anticipated capacity shortage, and that its proposal will encourage those resources able to do so to utilize smart grid technologies or other automated systems to respond to demand response deployment more quickly. PJM adds that resources that cannot take advantage of these technologies, can participate in PJM’s economic load response program.

50. PJM also responds to intervenors’ arguments that a default 30-minute lead time is unduly discriminatory to the extent PJM would devalue demand response resources that can physically respond in 30 minutes but require more than a 30-minute lead time for commercial reasons. PJM argues that while these commercial reasons may be relevant in

\(^{17}\) See discussion in section V.E of this order.
connection with PJM’s energy market, they should not be considered as a factor in the case of PJM’s capacity market, when the dispatcher is considering those resources capable of meeting the system’s reliability requirements.

51. With respect to the scheduled implementation of the proposed changes, PJM encourages the Commission not to be swayed by arguments that its proposal results in retroactive ratemaking, and PJM states that market participants have had advance notice of this proposal, and argues that most of the changes are needed presently. However, PJM states that once the transition period ends for the default 30-minute notification lead time (i.e., after the 2014-15 delivery year) some curtailment service providers may still have pre-existing contracts with their customers based on the rules that were in place during the capacity auctions for the remaining two delivery years (i.e., for 2015-16 and 2016-17).

52. PJM states that it supports a continued transition mechanism through the 2016-17 delivery year, and that it has notified its stakeholders of that intent. PJM also states that it is developing a new transition mechanism to address the transition issues faced by curtailment service providers in this instance and in similar future circumstances when PJM modifies its rules in a way that affects a capacity resource’s ability to meet its commitments. PJM describes a process whereby a resource that becomes unable to deliver some quantity of capacity by a given delivery year due to a rules change would be relieved of its obligation for that quantity, and have its payment reduced by a commensurate amount. PJM would then adjust the change in its total capacity commitment level by the same amount. PJM states that it can file such a mechanism in time for application to the 2015-16 delivery year.

4. Deficiency Letter Responses

53. With respect to the ability of demand response to deploy within 30 minutes, PJM responds that the number of demand response resources capable of responding within 30 minutes should be greater than the number of such resources currently registered as 30-minute lead time resources (and should increase over time), based on the participation of Economic Load Response in PJM’s synchronized reserves market, involving many of the same resources. PJM states a significant amount of Emergency Load Response has automated controls capable of deploying load reductions in near real-time, without any detrimental impact to the underlying electrical equipment.

54. With respect to the implications presented by those demand response resources that are unable to deploy within 30 minutes, PJM responds that such a resource that does not qualify for one of PJM’s proposed notice response exceptions would not be treated as a capacity resource. PJM notes that such a resource would still be permitted to participate in PJM’s Economic Load Response program as an energy-only resource.
5. Protests and Comments

55. EnerNOC, et al. and EnergyConnect, et al., in their protests, respond to PJM’s assertion that PJM’s run-time experience suggests that a number of demand response resources will be capable of being fully deployed within 30 minutes, and that resources that are not able to meet the 30-minute notification period or qualify for an exception will not be treated as a capacity resource. EnerNOC, et al. point out that PJM has large amounts of generation capacity that is not capable of responding, or required to respond, within 30 minutes, such that requiring demand response to do so is unduly discriminatory. EnerNOC, et al. further argue that excluding these demand response resources from participating in PJM’s capacity market will deprive PJM of resources that do, in fact, provide market benefits. EnergyConnect, et al. add that PJM’s reliance on the miniscule amount of demand response that is currently certified to provide synchronized reserves says nothing regarding the overall capabilities of demand response.

56. EnerNOC et al. also respond to PJM’s explanation that a number of Emergency Load Response resources have automated controls capable of deploying load reductions on a nearly real-time basis, without any detrimental impact to the underlying electrical equipment. EnerNOC, et al. argue that PJM’s answer fails to acknowledge that the mere existence of these technologies, systems, or onsite generation does not equate to the practical ability of any one customer to commit to a 30-minute notification period, and fails to account for the commercial realities faced by other demand response resources.

6. Commission Determination

57. For the reasons discussed below, we accept, subject to conditions, PJM’s proposal to establish, on a phased-in basis, a default 30-minute notification period for demand response load reductions. Under PJM’s proposal, a demand resource that clears in PJM’s capacity auction will be required to meet a default notification period of 30 minutes, unless that resource demonstrates, through an exceptions process, that a physical limitation precludes a reduction of load within 30 minutes (in which case, either a 60- or 120-minute notification time may apply). As PJM explains, increasing operational flexibility and requiring demand response resources to achieve full load reduction within 30 minutes will lead to a more reliable system and a more efficient use of demand response resources.

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18 As summarized above, PJM notes that there are currently approximately 350 MWs of Economic Load Response that have been certified to provide synchronized reserves, a service that must be provided with ten minutes of a dispatch directive.

19 See also EnergyConnect, et al. protest to PJM’s Deficiency Letter responses at 8.
58. We find that PJM’s proposal balances PJM’s need to quickly respond to system emergencies with the needs of demand response resources and appropriately addresses the concerns of demand response resources that may have physical limitations through the proposed exception process. As PJM explains, by grounding exceptions in the demand resource’s physical ability (as opposed to commercial considerations), the proposal appropriately aligns a demand resource’s technical capabilities with its obligations to respond, and ensures more efficient use of demand response resources in a comparable manner to generation capacity resources. We also find the proposal will encourage demand response resources participating in the capacity market to utilize smart grid technologies and other automated systems, which will facilitate demand response resources participation with as short a lead time as possible.

59. With respect to NRG’s argument that PJM’s proposal is unjust and unreasonable because it fails to evaluate each resource class and develop unit-specific response times that range from 30 minutes to 120 minutes, and EnerNOC, et al.’s proposal to adopt a one-hour notification period, we note while there may be other ways to address the problem identified by PJM, that fact does not result in PJM’s proposal being unjust and unreasonable. In submitting proposed tariff changes pursuant to a FPA section 205 filing, PJM need only demonstrate that its proposed revisions are just and reasonable, not that its proposal is the most just and reasonable among all possible alternatives. Therefore, we decline to address the proposed alternatives in the context of this section 205 proceeding.20

60. NRG and other commenters also request that PJM’s proposal be phased-in gradually. PJM already includes a phase-in as part of its proposal with the requirement to become effective for those registrations made for the 2015-16 delivery year. Additionally, PJM also recognizes that once the transition period ends for the default 30-minute notification lead time, curtailment service providers may have pre-existing contracts in place during the 2015-16 and 2016-17 delivery years.

61. To address this concern, PJM proposes to work with its stakeholders to develop a transition mechanism that would allow curtailment service providers that are no longer able to deliver amounts of demand response previously cleared in PJM’s capacity auctions to be relieved of part, or all of, their obligation and have their capacity payments commensurately reduced accordingly. We therefore accept PJM’s proposal to include a phase-in, and expect PJM to work with its stakeholders in developing a transition mechanism for curtailment service providers and submit to the Commission an appropriate transition mechanism in a new section 205 filing, as applicable through the

2016-17 delivery year. In support of those efforts, we direct PJM to submit a timely report with the Commission addressing the status of its stakeholder negotiations.

62. Finally, we reject the Industrial Customer Coalitions’ argument that PJM’s proposed 30-minute load response requirement violates the filed rate doctrine, because, it is claimed, this provision would apply to delivery years for which PJM has already held its capacity auction. Under the filed rate doctrine, a regulated entity may not charge, or be required by the Commission to charge, a rate different from the one on file with the Commission for a particular good or service.\(^{21}\) Here, however, PJM is not changing rates, or terms and conditions of service, relating to past performance; it is only changing the requirements applicable to future performance. Under these circumstances, PJM’s proposed tariff provisions will have a prospective application only and thus not violate the filed rate doctrine. Any entity that enters into a long-term obligation, does so with notice that a public utility, such as PJM, may seek to implement a prospective tariff change, pursuant to FPA section 205.\(^{22}\) Nothing in PJM’s auction rules, in this regard, limit PJM’s statutory filing rights to propose prospective changes in its tariff.\(^{23}\)

C. Default 30-Minute Notification Period Exceptions

1. PJM’s Proposal

63. PJM proposes exceptions to the default 30-minute notification period addressed in section V.B of this order. PJM states that these exceptions will generally track PJM’s

\(^{21}\) See Western Resources, Inc. v. FERC, 72 F. 3d 147, 149 (D.C. Cir. 1995) (filed rate doctrine, forbids a regulated entity to charge rates for its services other than those properly filed with the appropriate federal regulatory authority); Consolidated Edison Co. of New York, Inc. v. FERC, 347 F.3d 964, 969 (D.C. Cir. 2003) (filed rate doctrine precludes a rate adjustment taking place prior to a section 205 filing unless the parties are on notice that a past rate may be adjusted).

\(^{22}\) For example, when a party enters into a long-term 20-year, non-fixed rate contract for service at the tariff rate, it does so with the risk that the utility may file to increase that rate, or change the terms and conditions of service, during the term of the contract. See Midwest ISO Transmission Owners v. FERC, 373 F. 3d 1361 (D.C. Cir. 2004) (affirming the Commission’s allocation of costs to parties holding grandfathered contracts).

\(^{23}\) See generally ISO-New England Inc., et al., 145 FERC ¶ 61,095, at P 28 (2013) (accepting a revision to a capacity market that changed the conditions of service for resources committed in a prior auction).
existing tariff provisions which recognize the physical limitations of generators.\textsuperscript{24} Specifically, PJM proposes an exception process that will allow a curtailment service provider to confirm to PJM, at the time that the entity registers its resource, that its resource is not able to meet the 30-minute notification period due to a claimed physical limitation.

64. PJM states that such a request will be granted by PJM, upon PJM’s review and certification, based on four recognized exceptions, namely: (i) the avoidance of damage to major industrial equipment, the product generated, or the feedstock used in the manufacturing process; (ii) the time and manual effort required (in excess of 30 minutes) to transfer load to back-up generation; (iii) on-site safety concerns; or (iv) the inability to notify the mass-market residential customers that comprise the relevant demand response resource.\textsuperscript{25} PJM states that a curtailment service provider which qualify for an exception will be eligible to receive, as a replacement requirement, either a 60-minute, or a 120-minute, notification period before the demand response resource must provide its load reduction.

\section{Protests and Comments}

65. The Market Monitor argues that PJM’s 30-minute default notification period should be applied to all demand response resources, without exceptions.\textsuperscript{26} The Market Monitor asserts that the broad exceptions, as proposed by PJM, will only undermine the rationale for responding quickly and make it effectively impossible to administer the general rule. The Market Monitor adds that while no customer should be expected to incur damage to its equipment or operate unsafely, a customer facing these risks should not sell capacity into PJM’s capacity market. Exelon also objects to PJM’s proposed

\textsuperscript{24} See PJM Operating Agreement at Schedule 1, section 6.6, and the parallel provisions of the PJM OATT at Attachment K-Appendix (addressing parameter limitations for physical generation, including turn-down limitations, minimum down times, minimum run times, and maximum daily and weekly starts).

\textsuperscript{25} See proposed PJM OATT at Attachment DD-1 and proposed RAA at Schedule 6. PJM states that, should it require additional information before it can grant an exception, PJM will notify the curtailment service provider. PJM states that the curtailment service provider will then be required to respond within three business days, with a determination to be subsequently rendered by PJM within the following ten business days.

\textsuperscript{26} See also EPSA protest at 6; PSEG protest at 12; P3 protest at 5 (arguing that 30 minutes should be the rule with any exceptions to the rule narrowly drawn and extremely limited).
exceptions to a default 30-minute notice period as unreasonably broad, vague, and unduly discriminatory. Exelon argues that these exceptions should be rejected, or in the alternative, revised in a way that ensures that they will be sufficiently limited to physical characteristics and will not operate in an unduly discriminatory or preferential manner.

66. P3 argues that PJM’s proposed exception process lacks transparency. PSEG agrees, arguing that, under PJM’s proposal, a curtailment service provider would not be required to disclose its submission of an exception request, while PJM would be under no obligation to announce whether it has granted, or denied, the request. AEP, et al. argue that, in the event the Commission accepts PJM’s proposed exception, PJM should be required to phase the exception out after three delivery years, for the purpose of incenting curtailment service providers that depend on mass-market residential demand response to develop means to meet the proposed default 30-minute notification time. PSEG argues that, if the exemptions are retained, the performance obligations of the MWs committed as capacity under demand response portfolios should assume the full availability of the shorter lead time resources registered by the curtailment service provider before considering the longer lead time resources.

67. AEP, et al. characterize PJM’s proposed exception for damage to manufacturing products or feedstock as too broad and note that such an exception may inappropriately introduce a consideration of the economic impact on a given resource (e.g., business losses). Accordingly, AEP, et al. urge the Commission to reject this proposed exception. PSEG argues that PJM’s proposed exception would be similar to granting an exemption for generators based on the cost of fuel, an allowance that the Commission has previously rejected as a basis to excuse non-performance.

68. The Market Monitor further notes that a customer with unavoidable communications latency is a poor candidate when it comes to providing reliable demand response. AEP, et al., PSEG, and P3 argue that PJM’s proposed exception for “unavoidable communications latency” for certain mass-market residential demand response should be rejected, given that: (i) there are many automated programs designed to communicate critical information to large groups of individuals in short time frames; and (ii) the proposed exception would create no incentive for affected curtailment service providers to improve their communications systems. AEP, et al. also urge that PJM be required to adopt a clarification to its proposed provision, requiring curtailment service providers, seeking an exception, to notify PJM at the time the resource registers that it is

27 See also P3 protest at 9.

not able to meet the 30-minute notification time requirement. AEP, et al. argue that this provision should be amended to require that any such provider, upon obtaining an exception, demonstrate on an annual basis its continued eligibility for the exception.

69. EnergyConnect, et al. argue that, in the event that PJM’s proposed default 30-minute notice period is not rejected outright, the Commission should require PJM to revise its exception criteria to include a more comprehensive and non-exclusive list of legitimate business or commercial reasons addressing why a given demand response resource is unable to provide a load reduction in 30 or 60 minutes. EnergyConnect, et al. assert that, in addition to the four exceptions proposed by PJM, there would be other valid reasons, including physical or economic reasons, or a combination of the two.

70. EnergyConnect, et al. and EnerNOC, et al. object to PJM’s proposed exceptions process, allowing a curtailment service provider to notify PJM at the time the resource registers that it is not able to meet the 30-minute notification time requirement. EnerNOC, et al. argue that PJM’s proposal creates unnecessary and arbitrary barriers to entry for curtailment service providers. EnergyConnect, et al. agrees, noting that, under PJM’s proposal, the curtailment service provider will be required to inject itself into the business of each of its customers to make decisions as to how to accomplish a 30-minute notification period. EnergyConnect, et al. add that, when reliability is the issue, imposing a third party’s judgment on what lead times are appropriate for a given customer should not be the standard for compliance.

71. EnergyConnect, et al., among other intervenors, argue that PJM should be required to adopt a transition mechanism that honors commitments made in PJM’s capacity auctions under PJM’s currently-effective rules, because the proposed reduction in energy price cap levels will diminish the value of demand resource arrangements in derogation of valuable contract rights. EnerNOC, et al. request the Commission to direct PJM to adopt a transition mechanism that would apply through the 2016-17 delivery year, arguing that PJM’s proposal would materially impact the commitments that curtailment service providers have made with reasonable reliance expectations in past capacity auctions, and that the only other alternative would be to make the changes effective beginning with the 2017-18 delivery year.

72. Finally, EnerNOC, et al. and PHI request changes to PJM’s proposed exceptions, permitting a curtailment service provider to request such an exception based on a demonstrated inability to timely notify mass-market residential customers. PHI argues that a revised exception allowance is required, permitting a curtailment service provider to request such an exception based on a demonstrated inability to timely notify either mass-market residential customers (as PJM proposes) and mass-market non-residential
customers. EnerNOC, et al. request that this exception be amended to include “legitimate commercial activities.”

3. PJM’s Answer

73. PJM, in its answer, argues that its proposed notification period exceptions are reasonable and should be accepted, because these exceptions are based on physical limitations that would prevent a demand response resource from being able to comply with the default requirement.

74. PJM also responds to intervenors’ claim that PJM’s proposed criteria for granting exceptions to PJM’s proposed default 30-minute notification period, is overly vague, or in the alternative, too narrow. PJM argues that its proposed exceptions are comparable to the exceptions PJM allows to the default parameter limited schedules for generation resources. PJM adds that its proposed exceptions will appropriately limit this allowance, based on physical limitations, and will allow this process to be administered in a timely, consistent, and efficient manner.

75. PJM also responds to intervenors’ objections with PJM’s proposed mass-market exception, as based on an unavoidable communication latency. PJM argues that such an exception is appropriate to reflect the fact that some curtailment service providers are limited by the retail tariffs under which they are required to operate and which specify the communications protocols their retail customers are permitted to elect. PJM states that certain of these protocols, in particular the large volume of customers that elect to be notified by telephone, make it physically impossible to notify customers within the otherwise required shorter timeframes even with automated calling applications. PJM states that such programs therefore meet the base criteria of having a physical reason as to why the default response time cannot be met.

76. PJM also responds to intervenors’ concerns that the mass-market exception would apply to only the “residential” customer class. PJM states that it supports removing the restriction to residential customers, given that small commercial customers also participate in such mass-market programs. PJM adds, however, that it opposes

29 PHI notes that while the availability of Advanced Metering Infrastructure has permitted PHI to introduce dynamic pricing to both classes of mass-market customers, pricing notification capabilities have not been able to uniformly meet a 30-minute requirement. PHI adds that an exemption allowance extending to both customer classes is therefore warranted and was not objected to by PJM during PHI’s pre-filing meetings with PJM and the Maryland Commission to discuss these operational requirements. PHI requests that the Commission direct PJM to correct this apparent drafting error. See also NRG protest at 7.
EnerNOC, et al.’s suggestion that the exception include “legitimate commercial activities.” PJM argues that such a standard would invite unnecessary litigation.

4. Additional Answers

77. In its answer, P3 responds to intervenors’ arguments urging the Commission to expand the exceptions proposed by PJM to the default 30-minute notice period. P3 characterizes these proposals as loopholes that would make it more difficult for PJM to improve operations to support reliability on a cost-effective basis. P3 also responds to the request made by EnergyConnect, et al. that PJM create an exception for demand response from heating, ventilation and cooling (a source of demand response equal to 26 percent of demand response for 2013-14). P3 argues that the high participation level represented by this single source of demand response is exactly why it should not be eligible for an exception, given that this exception would only exacerbate the problem that has given rise to PJM’s filing.

78. The Maryland Commission, in its January 29, 2014 answer, responds to intervenors’ arguments opposing PJM’s proposed exceptions to its 30-minute default notification period. The Maryland Commission asserts that, while these arguments are premised on the asserted need for comparability between demand response and generation, it is not the case that all generation responds to PJM dispatch instructions within 30 minutes.30

79. EnergyConnect, et al., in their answer, respond to the arguments made by Exelon and P3 that response times for demand response resources should be based on only the physical characteristics of demand response resources and not based on economic considerations. EnergyConnect, et al. argue that demand response resources have different characteristics and serve different purposes than generation that cannot be ignored. EnergyConnect, et al. notes, for example, that demand response resources, unlike generation, are not an investment whose essential function is to supply electric services.

80. PHI, in its answer, supports PJM’s proposal to amend the residential restriction exception to the 30-minute notification requirement for mass-market customers. PHI argues that the removal of this restriction is appropriate to avoid disqualification of non-residential, small-commercial customers, given that these customers are similarly-situated to residential customers. PHI also responds to intervenors’ arguments that the communications latency issue, as offered in support of the exception for mass-market customers, is due to self-imposed restrictions in the utilities’ communications protocols and/or technology, and could be eliminated by an investment in

30 See also EnerNOC, et al. answer at 15.
communications infrastructure. PHI argues that the limitations with regard to notification periods do not stem from the utilities’ actions, nor are they due to the failure to invest in communications infrastructure. PHI adds that, in its case, the choice of each customer, as to notification preferences, largely dictates the method of notification, associated limitations, and the resulting communications latency found in mass-market demand response programs.

5. Commission Determination

81. For the reasons discussed below, we accept, subject to conditions, PJM’s proposal to include narrowly drawn, explicit exceptions for demand response resources that are physically incapable of reducing load in 30 minutes. PJM’s proposal to allow exceptions based on a demand response resource’s physical ability (as opposed to commercial considerations) appropriately aligns a demand response resource’s technical capabilities with its obligation to respond.

82. In response to various proposals to modify the exceptions, such as proposals to apply the 30-minute lead time requirement to all demand response resources without exception, amend or expand the exceptions for various reasons (such as legitimate commercial business activities), or phase out the exceptions after a period of time, we find that PJM’s exceptions as proposed will provide PJM with valuable, additional flexibility in the dispatch of demand response resources while reflecting the technical capabilities of these demand response resources, and are therefore just and reasonable. We note that that PJM need only demonstrate that its proposed revisions are just and reasonable when submitting proposed tariff changes pursuant to a FPA section 205 filing. Therefore, we decline to address proposed alternatives in the context of this section 205 proceeding.31

83. Similarly, while it may be just and reasonable to only allow demand response resources with a 30-minute lead time to participate in PJM’s capacity markets, we find that this does not make PJM’s proposal not just and reasonable, particularly as we have found it just and reasonable for demand response resources to participate with two-hour lead times. We also deny the request to phase out the exceptions as we cannot predetermine if or when the technical capabilities of demand response resources inside PJM will improve as to make the exceptions unnecessary. PJM, working with its stakeholders, always has the option to review and as necessary revise exceptions to the 30-minute notification period.

31 See City of Bethany v. FERC, 727 F.2d 1131, 1136 (D.C. Cir. 1984).
84. We find that PJM’s proposal to include narrowly drawn, explicit exceptions appropriately addresses concerns that the exception process will be difficult to administer while simultaneously addressing concerns that the exception process will result in potential claims and litigation. We agree with PJM that the narrowly drawn exception process will ensure that only those demand response resources that are not physically capable of meeting the 30-minute default time are allowed longer lead times.

85. Intervenors object to the proposed mass-market exception, based on unavoidable communication latency. However, we find that PJM has provided sufficient justification in its filing supporting a mass-market exception. Certain demand response providers may be limited by retail tariffs, which can include provisions allowing large volumes of retail customers to be notified via telephone, which would make it physically impossible to notify customers in shorter timeframes even with automated calling applications. We therefore find it reasonable for PJM to allow a mass-market exception. We note that several intervenors indicated support for removing the restriction to “residential” customers in the mass-market program exception, and PJM agreed that the exception should apply to similarly situated, small commercial customers. Accordingly, we accept PJM’s proposal, subject to PJM’s submission of revised tariff language, in its compliance filing, to also include small commercial customers in its mass-market exception.

86. Finally, we agree with intervenors that transparency in the exception process is appropriate, and will assist PJM and its stakeholders in monitoring and evaluating the lead-time requirements for demand response resources participating in the Emergency and Pre-Emergency Load Response Programs. Accordingly, we accept PJM’s proposal, with the understanding that PJM will prepare and present to stakeholders an annual report on the aggregate quantities of demand response resources granted exceptions each delivery year.

D. Minimum Run-Time Requirements

1. PJM’s Proposal

87. PJM proposes to modify the run-time requirements applicable to a demand response load reduction (the minimum event duration period) from its existing two-hour requirement to a one-hour requirement.\(^{32}\) PJM states that this revision is required in order to give PJM’s dispatchers flexibility if demand response resources are needed only for a short period of time, or to reverse course when system conditions change during the course of a load management event, that is if the emergency condition giving rise to the load management event is no longer in effect.

\(^{32}\) See proposed PJM Operating Agreement at Schedule 1, section 8.8, and the parallel provisions of the PJM OATT at Attachment K-Appendix.
2. **Protests and Comments**

88. The Market Monitor generally concurs with PJM that for demand response to operate as a substitute for capacity, it is essential that it has a short minimum duration time. The Market Monitor asserts that customers that cannot resume operations quickly when reductions are no longer needed should not attempt to provide demand response or should provide demand response only as part of a portfolio, and that a one-hour minimum duration is the maximum reasonable parameter for demand response.

89. The Maryland Commission objects to PJM’s proposal to reduce the minimum demand response event duration from two hours to one. The Maryland Commission argues that a two-hour duration is needed, and should be retained, by mass-market programs in order to achieve their promised load reductions. The Maryland Commission also argues that a two-hour commitment is needed to average achieved load reductions over several hours to obtain the reduction commitment, and requests that, if this practice is not continued, penalties not be assessed against participants for shortages in load reduction commitments where an event is limited to one hour.

3. **PJM’s Answer**

90. PJM responds to the Maryland Commission’s argument that mass-market demand response customers should be exempt from PJM’s proposed default one-hour minimum run time and should instead continue to be subject to PJM’s existing two-hour minimum run time. PJM argues that the Maryland Commission’s assumption that mass-market demand response customers are not capable of complying with a one-hour minimum run time is unsupported. PJM adds that, regardless, both an exemption from the 30-minute default notification and an exemption from a one-hour minimum run time are not required to address the operational requirements of mass-market demand response customers.

4. **Additional Answers**

91. In response to PJM’s argument that the two-hour notice period exemption addresses the Maryland Commission’s concerns regarding the needs of mass-market demand response customers, the Maryland Commission in its February 13, 2014 answer argues that notice to the customer and customer response to that notice are two different actions. The Maryland Commission adds that many customers do not receive notice until the end of the two-hour period and maximum load reduction occurs over a subsequent two-hour period. The Maryland Commission argues that the retention of the existing standard is necessary so that Maryland consumers will not be denied compensation to which they should be entitled for curtailing their electric usage.
5. Commission Determination

92. We accept PJM’s proposal to shorten the minimum run-time for demand response resources from two hours to one hour. We find that this proposal will allow PJM to more rapidly make appropriate adjustments when changes in system conditions render load reductions from previously dispatched demand response resources unnecessary. We agree with PJM that the notification exemption provides sufficient time for curtailment service providers to notify mass-market demand customers and for those resources to reduce their load.

93. The Maryland Commission argues that even with the two-hour notice period, mass-market customers notified near the end of the period may not have enough time to respond to comply with PJM dispatch over the one-hour run time. However, the Maryland Commission provides no additional support explaining why mass-market demand response resources would be incapable of complying with the one-hour minimum run time in light of a two-hour notification period. Thus, we also deny the Maryland Commission’s request that performance penalties be waived when events are limited to one hour.

E. Offer Price Stratification

1. PJM’s Proposal

94. PJM proposes to establish revised, escalating caps on the strike prices (or, “offer price stratification”) submitted for Pre-Emergency Load Response, Emergency Load Response, as well as offer prices for Economic Load Response. PJM states that because a Pre-Emergency Load Response resource will be deployed by PJM as one of the last steps taken prior to the occurrence of a shortage event, such a resource should be eligible to set price at a level that is just below the price that would be set under PJM’s shortage pricing rules.

95. Accordingly, PJM proposes to establish a cap on the required offer price for those Pre-Emergency Load Response and Emergency Load Response resources that are subject to a 30-minute notice period, and for Economic Load Response, equal to

33 Under PJM’s current rules, a cap equal to $1,000 per MWh plus two times the applicable primary reserve penalty factor (collectively, $1,800 per MWh) applies to all offers submitted by a demand response resource. The penalty factors and the market offer caps will rise over the next to two years, up to $2,700 per MWh. See PJM Operating Agreement at Schedule 1, section 3.2.3A.001(c) and the parallel provision of the PJM OATT at Attachment K-Appendix.
$1,000 per MWh, plus the applicable primary reserve penalty factor, minus $1.00.\textsuperscript{34} PJM states that a lower required offer cap will apply ($1,000 per MWh, plus the applicable primary reserve penalty factor divided by two) for those resources subject to a 60-minute notice period, while a cap of $1,100 per MWh will apply for a resource subject to a 120-minute notice period.

2. Protests and Comments

96. The Market Monitor characterizes PJM’s offer price stratification proposal as arbitrary and unsupported, arguing that offer price caps for demand response resources should be set no higher than the offer caps for generation resources. The Market Monitor argues that PJM’s existing offer cap of $1,800 per MWh incorrectly values demand response at shortage pricing levels, given that demand response resources can be called when PJM has adequate reserves. The Market Monitor also maintains that PJM should modify its existing tariff to require that demand resources offer into the day-ahead market at a $1,000 per MWh offer cap.

97. NRG notes that, while resources with short lead times should be provided an opportunity to earn additional revenues via certain ancillary services markets, PJM should not be permitted to adjust the offer caps afforded to demand response resources, based on whether they can meet PJM’s proposed 30-minute response time. NRG asserts that the correct approach is to create the appropriate market signals that will incent customers, regardless of resource type, to participate in appropriate ancillary service programs.

98. P3 argues that, under PJM’s proposal, a tiered pricing of demand response will be created, as based on notification lead times, assuming that most demand response resources offers in at their offer caps. P3 asserts, however, that offer price stratification should be unnecessary if the default notification period is 30 minutes and demand response is only permitted to obtain a longer notice period in very limited circumstances. P3 adds that stratification would be a bad precedent as applied to generation resources, given that stratification of generation offer caps would suggest that resources with faster start times should be permitted to offer at higher prices than units with slower start times, but higher variable costs.

99. PSEG requests that, at a minimum, PJM should be required to clarify that long lead-time demand response resources will only be dispatched when shorter lead-time resources are not available.

\textsuperscript{34} Id. at Schedule 1, section 1.10, and the parallel provisions of the PJM OATT at Attachment K-Appendix.
100. Exelon states that while it supports PJM’s proposal to set the offer price ceiling at the 30-minute notification period for all demand response resources, it objects to the proposal to stratify the offer caps for resources with different notification periods. Exelon argues that all demand response resources should be able to express their willingness to curtail up to the cap proposed for 30-minute notification period resources ($1,000 per MWh, plus the applicable primary reserve penalty factor minus $1) without limitation. Exelon asserts that it is discriminatory and unnecessary to provide stratification for demand response resources with different notification times. Exelon further asserts that PJM’s capacity markets acquire a generic capacity product, and that offer price stratification results in different resource types receiving different pricing outcomes based on their notification periods. Exelon argues that this does not support the procurement of a generic, physical characteristics capacity product because offer price stratification would pay different resources different prices for the same capacity product.

101. EnergyConnect, et al. argue that offer price stratification, as proposed by PJM, will lower emergency energy payments and establish a protocol whereby some demand response resources will be paid more for energy reductions than others. EnergyConnect, et al. assert that such an approach will upset curtailment service providers’ existing contractual rights and impose new risks on their customers. EnergyConnect, et al. add that PJM’s proposal will reduce participation in higher value Extended Summer Demand Resources and Annual Demand Resources, thereby resulting in a net loss of these products and ultimately producing higher capacity prices.

3. PJM’s Answer

102. PJM, in its answer, responds to intervenors’ arguments that PJM’s proposed offer price stratification is unnecessary, because all demand response resources must provide capacity, either under the default 30-minute notification period, or under an exception. PJM argues that resources that are physically limited from achieving full load reduction within 30 minutes may work towards modifying their processes or automating their systems to be able to meet the 30-minute notification period and offer in at the highest level. PJM asserts that the stratification it proposes will provide such incentives to the limited class of resources under the exception without sacrificing the 30-minute requirement applicable to all other resources.

103. PJM also responds to Exelon’s argument that PJM’s proposed price stratification does not support the procurement of a generic physical capacity product because the price stratification would pay different resources different prices for the same capacity product. PJM argues that its proposal does not call for different capacity payments for the same capacity product, but rather for a stratification of the energy offer payments made to a demand response resource.
104. PJM also responds to PSEG’s concern that PJM’s dispatch decisions, under PJM’s proposal, will cause PJM to call on shorter lead-time resources more frequently. PJM argues that having shorter lead-time resources available will only give PJM additional time prior to an emergency or pre-emergency condition. PJM states that, as a result, fewer demand response resources will be called.

4. **Additional Answers**

105. AEP, et al., in its answer, respond to intervenors’ arguments opposing PJM’s offer price stratification proposal. AEP, et al. agree that PJM has failed to support its claim that stratified offer caps will incent demand response, given that PJM will have discretion in choosing which demand response resource to dispatch and thus the order in which PJM will dispatch demand response remains uncertain. Accordingly, AEP, et al. recommend that PJM be required to rely on its proposed default 30-minute notification period, subject to an exceptions process, which would mirror the requirements imposed on generation.

106. Exelon, in its January 29, 2014 answer, supports the Market Monitor’s protest opposing PJM’s proposed escalating caps on the offer prices submitted for Pre-Emergency Load Response, Emergency Load Response, and Economic Load Response. Exelon agrees that the offers submitted by generating resources and demand response resources should be capped at a uniform offer cap of $1,000 per MWh.

107. Exelon, in its March 6, 2014 answer, responds to PJM’s answer, addressing Exelon’s opposition to PJM’s price stratification proposal. Exelon asserts that PJM mischaracterizes its opposition to PJM’s proposal as an opposition to a proposal to stratify capacity offer caps. Exelon clarifies that it opposes PJM’s proposal to stratify energy offer caps, not capacity offer caps.

5. **Deficiency Letter Responses**

108. To the question of whether PJM’s proposed offer caps will reflect the value of demand response in situations in which PJM is short, or not short of reserves, PJM explains that, first, its proposed offer caps are higher than those currently applicable to generation capacity resources in order to reflect the high cost of consumer load curtailment and the desire to interrupt customers only when PJM is in, or approaching, a reserve shortage. Second, PJM states that its offer levels are consistent with how PJM deploys these resources, i.e., to maintain its reserves, such that the value of this capacity should be less than the prices achievable during a reserve shortage. Third, PJM states that offer price stratification will allow 30-minute resources to offer at the highest value followed in turn by 60-minute resources and then 120-minute resources. PJM states that this flexibility will promote PJM’s efficient and effective operation of its system.
109. With respect to a comparison of PJM’s proposed Demand Response offer caps and the existing rules applicable to generation capacity resources, PJM responds that offers from generation capacity resources, in addition to being subject to a $1,000 per MWh offer cap, can be mitigated to actual costs when (i) a generator is called upon to relieve a transmission constraint; and (ii) its portfolio does not pass the three-pivotal-supplier test. PJM notes that, by contrast, the only cap applicable to demand response resource offers is the energy market offer cap, given that demand response is not considered to have an incentive to exercise market power. PJM adds that, under its proposal, it would maintain offer caps on demand response resources that are in excess of the $1,000 per MWh value, but set such caps so that there is no incentive to minimize the notification time submitted by demand response. PJM further proposes to recognize the reduced operational value to the system of resources with longer notification times.\footnote{35}

6. \textbf{Protests and Comments}

110. The Market Monitor, in its comments, responds to PJM’s explanation regarding the extent to which PJM’s offer price stratification proposal will appropriately reflect the value of demand response in all circumstances, both when PJM is, or is not, short on reserves. The Market Monitor argues that PJM’s response fails to justify offer price caps for demand response that exceed the cap in place for generation resources. The Market Monitor adds that the purpose of system offer price cap is to provide an upper bound to the potential exercise of market power in extreme conditions. The Market Monitor argues that such a cap should apply uniformly to all resources.

111. The Market Monitor also challenges PJM’s assumption that disparate treatment is justified, as between the offer caps applicable to capacity generation resources and capacity demand response resources, given that demand response resources do not have an incentive to exercise market power. The Market Monitor responds that this assumption is mistaken, given that demand response resources, like generation resources, do have an interest in raising prices to receive additional revenue, or to engage in economic withholding. The Market Monitor adds that those generation owners that are affiliated curtailment service providers have an incentive to raise prices for their entire portfolio.

\footnote{35} PJM states, however, that its lowest offer cap would remain in excess of the $1,000 per MWh level applicable to generation resources and that no such stratification would apply to generation resources, given that parameter limitations already apply to generation resources that require offer parameters, consistent with their physical capabilities.
7. **Commission Determination**

112. We accept PJM’s proposal to set different required offer caps for demand response resources based on their notification times, subject to the conditions set forth herein. PJM’s proposal recognizes the reduced operational value of resources with longer notification times and will enable PJM to promote more efficient and effective operations.

113. NRG argues that offer price stratification for demand response resources is unjust and unreasonable and that any additional revenues should be available to all fast responding resources, not just demand response resources, possibly through ancillary service markets, and that limiting the opportunity for additional revenues to demand response resources will lead to inefficient market outcomes. Given that the current offer cap for capacity demand response resources exceeds both the offer cap for generators and the maximum offer cap for demand response resources under the proposal, we do not see how the proposed offer price stratification will result in less efficient market outcomes than the currently just and reasonable rules.

114. Intervenors argue that offer price stratification is unnecessary given the standard 30-minute notification time and exception, or that all demand response resources should be subject to the same offer cap regardless of notification time. We find that PJM’s proposal is reasonable, because it permits PJM to dispatch demand response resources in a more precise manner while providing additional incentives for resources to improve their response times to ones that better accommodate themselves to PJM’s dispatch needs.

115. P3 argues that offer price stratification sets a bad precedent given that stratification of generation offer caps would allow generators with faster start times to offer in their energy at higher prices than units with slower start times, but higher variable cost. In its filing, PJM has not proposed changes to compensation of generation, and we find the tariff treatment of generation to be beyond the scope of this filing.

116. We deny PSEG’s request for clarification that long lead-time demand response will only be dispatched when shorter lead-time resources are not available. PJM’s dispatch of generation resources is not based solely on economic characteristics, but also on various operational characteristics. As such, we see no reason to further restrict PJM’s ability to dispatch demand response resources. In addition, as PJM explains in its deficiency letter response, PJM expects to call on shorter lead-time resources more frequently than longer lead-time resources, and that it expects to generally call on demand response resources less often. Similarly, we do not find merit with AEP, et al.’s concerns about PJM’s discretion in the dispatch of demand response resources because PJM already exercises the same sort of discretion in the dispatch of generation resources.
117. EnergyConnect, *et al.* argue that PJM’s proposal will reduce energy payments to curtailment service providers which may upset existing contractual rights and impose new risks on their customers, and that it may lead to reduced demand response participation and higher capacity prices. As discussed above, we find that PJM’s proposed transition mechanism provides sufficient protection for demand response resources with existing contractual arrangements. Thus, we find no merit with EnergyConnect, *et al.*’s concern that PJM’s proposal is insufficiently deferential to demand response resources as PJM’s proposal is more deferential to the characteristics of demand response resources than other just and reasonable alternatives.

118. With respect to the offer caps, the Market Monitor and Exelon argue that the caps for demand response resources should be set at the same level as generation resources, and that the existing offer cap incorrectly values demand response at shortage pricing levels during times when PJM has adequate reserves. PJM concedes in its filing that the current rules allow for demand response resources to be valued at shortage pricing levels when the system is not in a shortage pricing condition. The proposed price stratification is specifically intended to address this issue. To that extent, PJM’s pricing stratification proposal is an improvement over the current pricing for demand resources and we therefore find that it is just and reasonable.

119. However, given the concerns submitted by the Market Monitor, we direct PJM, with the input of the Market Monitor, to submit a report on compliance within nine months from the date of this order that provides an assessment of: (i) demand response resource dispatch by event, resource price, and notification time; (ii) the effectiveness of the dispatch of demand response resources under the new program (e.g., evidence of more efficient and economic dispatch practices); (iii) the effects of demand resource dispatch on Locational Marginal Price; and (iv) whether PJM’s proposal addresses the Market Monitor’s concerns related to market power and the interruption of shortage pricing signals, including the extent to which a uniform offer price cap could ameliorate these concerns.

120. The Market Monitor also argues that PJM should go beyond this filing and require demand resources to offer into the day-ahead market. PJM’s current tariff does not require demand response resources to offer into the day-ahead market, and this filing does not address this issue. We note that the Market Monitor has filed a complaint in Docket No. EL14-20-000 regarding this issue.

**F. Measurement and Verification**

1. **PJM’s Proposal**

121. PJM proposes to add enhanced compliance measurement and verification procedures to capture more accurate compliance information for load management events. PJM states that, under its existing rules, it measures load response compliance by
reference to a single clock hour, (a single 60-minute period) after the full load reduction has been achieved, as measured from the top of the hour, regardless of the duration of the load management event. In place of this existing mechanism, PJM proposes to measure compliance for all hours, when the dispatch at issue extends to at least 30 minutes of the clock hour. 36 Since minimum response time is one-hour, PJM will pro-rate performance in clock hours where a demand response resource performed for more than 30 minutes and less than an hour to measure compliance. PJM also proposes to allow curtailment service providers to provide real-time operational data to PJM, that is, one-minute load data, regarding the availability and status of their Pre-Emergency Load Response resources.

2. **Protests and Comments**

122. The Market Monitor argues that PJM should be required to use actual data at five minute intervals and that PJM’s proposal, using proration based on 30 minutes of a clock hour, is not adequate.

123. The Industrial Customer Coalition questions PJM’s proposal to measure load response compliance for all hours in which a demand response resource has been dispatched for at least 30 minutes of the relevant clock hour. Specifically, the Industrial Customer Coalition questions the effects of this proposal on Firm Service Level customers. 37 The Industrial Customer Coalition argues that, under PJM’s compliance measurement proposal (which is based on an hourly integrated value), a Firm Service Level customer could be unjustifiably and erroneously deemed non-compliant, under certain scenarios in which the load reduction requirement begins 30 minutes into the hour and the customer reaches compliance 15 minutes into the hour (that is, 15 minutes in advance of the load reduction target time). The Industrial Customer Coalition argues that, while PJM purports to address this contingency by allowing curtailment service providers to submit one-minute load data, most Firm Service Level customers do not have this ability.

124. PSEG argues that while PJM’s measurement and verification proposal may be premised on the laudable objective of incenting load reduction in a timely manner, PJM’s proposed mechanism will inevitably result in inaccurate measurements. PSEG asserts

36 See proposed PJM OATT at Attachment DD-1, paragraph K. PJM proposes to apply this methodology to Firm Service Level customers and Guaranteed Load Drop customers, but not to non-interval metered Direct Load Control customers (given that this latter customer group is already measured based on actual times).

37 Firm Service Level customers have a load response obligation that is set at a predetermined level.
that because measurement may be affected by usage during the periods before, or after, a load management event, and will ignore usage that is less than 30 minutes of a clock hour occurring during the load management event, this mechanism will understate, or overstate actual compliance. PSEG adds that, to achieve accurate measurement, interval meters capable of reading usage over a five-minute interval should be required.

125. EnergyConnect, et al. also seek changes to PJM’s proposed measurement and verification procedures, arguing that clarification is required that any demand response resource dispatched by PJM on the same day, within the same zone, will be aggregated together for the purpose of compliance calculations. EnergyConnect, et al. add that this aggregation practice should be applied not only across lead times, but also to any Emergency/Pre-Emergency distinction, and to all demand response products. EnergyConnect, et al. assert that such an approach would mitigate, though not eliminate, the harm imposed on curtailment service providers as a result of PJM’s granular dispatch proposal. For this same reason, EnergyConnect, et al. further propose that curtailment service providers’ performance be aggregated across those locational areas that are not separated by price in PJM’s capacity auctions.

3. PJM’s Answer

126. PJM, in its answer, responds to EnergyConnect, et al. ’s proposal to allow all demand response assets dispatched by PJM on the same operating day and within the same zone, regardless of type, to aggregate their performance for the purpose of compliance calculations. PJM states that it would support a compliance filing directive to implement this proposal. PJM asserts that this proposal is consistent with comparability principles between generation and demand response resources regarding compliance performance and is line with PJM’s stated goal of dispatching demand response resources in a more precise manner while ensuring appropriate compliance.

127. PJM also responds to the Industrial Customer Coalition’s numerical analysis supporting its claim that PJM’s proposed measurement and verification procedures may lead to the incorrect determination that a Firm Service Level demand response resource is non-compliant. PJM argues that the analysis at issue is premised on an unsupported hypothetical scenario and otherwise incorrectly describes PJM’s proposal.

4. Commission Determination

128. We accept, subject to the condition set forth herein, PJM’s proposal to change its measurement and verification process to account for demand response resources dispatched for at least 30 minutes inside a clock hour. We find that these changes will allow more efficient dispatch of demand response, maintain incentives for curtailment service providers to follow PJM’s dispatch instructions, and avoid confusion in the market between curtailment service providers and their customers. PJM’s proposal also reflects the technical limitations of how retail customers record and store load data.
129. EnergyConnect, et al. seek changes to PJM’s measurement and verification rules to allow aggregation for the purpose of compliance calculations. EnergyConnect, et al. argue that this aggregation right would be similar to the rights currently available to fleets of generators. In its answer, PJM agrees that developing these rules would promote comparability. Accordingly, we accept PJM’s proposal, subject to PJM’s submission of revised tariff language, in its compliance filing, to allow all demand response assets dispatched by PJM on the same operating day and within the same zone, regardless of type, to aggregate their performance for the purpose of compliance calculations as agreed to by PJM.

130. We reject the Market Monitor’s and PSEG’s argument that measurement and verification should be tracked on a 5-minute basis. This request goes beyond what PJM has proposed and is therefore beyond the scope of this filing. We find PJM’s proposal reasonable, since, as PJM points out, many retail customers do not have the ability to track their load data on a 5-minute basis. Requiring this level of granularity would require customers to invest in significant, costly upgrades, or to exit PJM’s markets. We find that, at the present time, this requirement would create an undue burden on demand response resources seeking to participate in PJM’s markets.

131. We reject the Industrial Consumer Coalition’s concern that the pro-rating under PJM’s proposal creates additional risks of non-compliance for Firm Service Level customers that consume above their peak load contribution in the run-up to being dispatched by PJM. As PJM points out, the same pro-ration creates a tendency for a resource which is consuming under its peak load contribution to over-comply with PJM’s dispatch. Furthermore, the example that the Industrial Consumer Coalition used to illustrate their concerns would not constitute a problem if PJM’s proposed rules were applied correctly, and any other problems are strictly hypothetical.

G. Sub-Zonal Dispatch

1. PJM’s Proposal

132. PJM seeks authorization to impose, on a phased-in basis (i.e., a one-year transition period), a sub-zonal dispatch process that will allow PJM to define a sub-zone during the operating day if a load management event occurs. PJM proposes to use sub-zonal dispatch in combination with the proposed offer strike prices and will assess the Demand Resource Compliance Penalty Charge to demand resources that are dispatched during the operating day on a sub-zonal basis but do not adequately respond within the applicable notification periods.

133. PJM explains that, under its current rules (as approved in a 2012 proceeding on a phased-in basis, but not yet fully implemented), PJM is currently permitted to dispatch more-granular aggregations of demand response resources in more focused sub-zones so long as PJM establishes the sub-zone at least one day prior to the load management
PJM implemented a transition period where for the 2012-13 and 2013-14 delivery years demand resources could voluntarily participate. Compliance with day-ahead sub-zonal dispatch is mandatory beginning with the upcoming 2014-15 delivery year.

134. PJM states that a same-day establishment of the sub-zone is now appropriate in order to further enhance PJM’s operational flexibility. PJM justifies full implementation of day of sub-zonal dispatch after a one-year transition period (that is during the 2015-16 delivery year and beyond) because demand resources have had the opportunity to become familiar with more granular day-ahead sub-zonal dispatch leading up to the time day ahead sub-zonal dispatch becomes mandatory for the 2014-15 delivery year.

2. Protests and Comments

135. EnergyConnect, et al. argue that PJM’s sub-Zonal proposal will have the effect of marginalizing demand response participation in PJM’s markets, given that numerous demand response resources will be unable to comply on a sub-zonal basis.

136. EnerNOC, et al. argue that PJM’s sub-Zonal dispatch proposal is unduly discriminatory in the disparate treatment it accords generation resources and demand response resources, absent an allowance for aggregation in measurement.39

137. NRG requests that PJM be required to revise its proposal to provide two-hour advance notice, prior to any advanced notification associated with the curtailment activation, defining sub-Zonal resources within the operating day.

138. AEP, et al. characterizes PJM’s sub-Zonal proposal as a half-measure that should be rejected in favor of a nodal dispatch approach, as accompanied by a requirement for appropriately granular telemetering.40

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38 See PJM filing at 31 (citing PJM Interconnection, L.L.C., 139 FERC ¶ 61,057 (2012)).

39 See supra section V.F of this order (addressing measurement and verification).

40 AEP, et al. note that, under PJM’s proposal, by contrast, PJM will be limited to dispatching largely unknown and oversized blocks of demand response, such that the treatment of demand response and generation will not be comparable.
3. **PJM’s Answer**

139. PJM, in its answer, responds to EnergyConnect, *et al.*’s claim that demand response resources will not be able to comply with PJM’s proposal to measure demand resource compliance by sub-zone. PJM argues that EnergyConnect, *et al.*’s assertion is unsupported, and that EnergyConnect, *et al.* provided no factual support for their claim that Demand Resources will not be able to comply with PJM’s sub-zonal Compliance Proposal. PJM adds that, regardless, its proposal is necessary and appropriate to ensure that demand response resources will comply with their responsibilities to operate on a sub-Zonal basis.

140. PJM also responds to NRG’s request that PJM provide two hour advance notice, prior to any advanced notification associated with a curtailment activation, as applicable to the establishment of a sub-zone within the operating day. PJM argues that it will not always be possible to provide two-hour notice, when establishing a sub-zone within the operating day, given that system conditions can change rapidly.

141. PJM also responds to AEP, *et al.*’s argument that PJM should be required to adopt a nodal dispatch mechanism in response to the needs outlined in PJM’s filing. PJM argues that the costs associated with deploying demand response resources by node and aggregating demand response resource performance for compliance, by node, would far outweigh the benefits of deploying demand response resources by node.

4. **Additional Answers**

142. P3, in its answer, responds to intervenors’ arguments in opposition to PJM’s proposed same-day sub-zonal dispatch proposal. P3 asserts that PJM’s proposal should be accepted, given that it will promote a more granular dispatch of demand response which will, in turn, improve reliability and reduce costs.

143. PSEG, in its answer, responds to intervenors’ argument that, under PJM’s same-day sub-zonal dispatch proposal, undue and discriminatory burdens will be imposed on curtailment service providers, *vis-à-vis* the comparable obligations imposed on generation resources. PSEG argues that curtailment service providers do not require, or warrant, flexibility to spread their performance risk over a large customer base, based on an asserted (but ill-founded) comparability claim, that is based on the Equivalent Demand Forced Outage Rate measurement applicable to generators. PSEG asserts that this generation metric is an availability assessment that does not apply to demand response availability. PSEG further asserts that the level of potential performance penalties and other performance risks applicable to generators is comparable, if not more demanding, than the performance penalties and risks applied to curtailment service providers.

144. EnergyConnect, *et al.* also respond to PJM’s explanation regarding the ability of demand response resources to respond to voluntary, day-ahead sub-zonal dispatch
requests. EnergyConnect, et al. argue that while data reported by PJM, in its answer, reflect committed reductions ranging from 47 MW to 380 MW, covering eight sub-zonal events from 2010 through 2013, PJM’s portfolio of demand response resources is in excess of 11,000 MW. EnergyConnect, et al. suggest that, as such, this data demonstrates that PJM has, in fact, had very limited experience with voluntary day-ahead, sub-zonal dispatch requests. EnergyConnect, et al. add that if a curtailment service provider has a portfolio of customers located across a variety of locations, or a single customer has a footprint that is larger than a sub-zone, implementation of same-day sub-zonal dispatch will be difficult and costly.

5. **Deficiency Letter Responses**

145. In response to the Deficiency Letter’s inquiry about the ability of demand response to comply with a sub-zonal request when the sub-zone is established during the same operating day, PJM responds that, in 2012, the majority of load reductions on its system, as made by Economic Load Response resources (59 percent), came from entities choosing to participate in the real-time market. PJM further notes that a majority of all Economic Load Response resources (57 percent), also participate as Emergency Load Response, and that a certain percentage of this sub-set would have the ability to respond to a sub-zonal event were the sub-zone to be created on the operating day.

146. With respect to the Deficiency Letter’s inquiry regarding the costs attributable to day of sub-zonal dispatch, PJM responds that curtailment service providers are already required to implement and maintain electronic notification capability for zonal dispatch, which is the same process used for sub-zonal dispatch. PJM states that, as such, the implementation of sub-zonal dispatch will not impose prohibitive costs on curtailment service providers.

6. **Protests and Comments**

147. EnergyConnect, et al. object to PJM’s citation of its experience with Economic Demand Resources as evidence that demand resources can comply with same-day sub-zonal requests. EnergyConnect, et al. argue that Economic Load Response resources are a small subset of all demand resources participating in the capacity market, and cannot be used by PJM as evidence that PJM has any material experience with same-day, sub-zonal dispatch of demand resources generally. They also note that PJM’s experience with Economic Demand Resources is not applicable to same-day, sub-zonal dispatch. Since offers from Economic Demand Resources are due to PJM before 6:00 PM the day before they can be called, curtailment service providers know no later than the evening before the potential curtailment that they might be curtailed the following day.

148. EnergyConnect, et al. also disagree with PJM’s statement that since curtailment service providers must already be implementing and maintaining electronic notification capability for zonal dispatch, that same-day, sub-zonal dispatch will not impose
prohibitive costs. EnergyConnect, et al. argue that PJM ignores the compound effects of shorter notice and same-day, sub-zonal dispatch on the implementation costs of curtailment service providers and that same-day, sub-zonal dispatch hampers curtailment service providers’ ability to mitigate exposure to performance penalties.

7. Commission Determination

149. We reject PJM’s proposal to create sub-zones inside an operating day, and to require demand response resources to respond to dispatch inside these sub-zones (or same-day, sub-zonal dispatch) or face penalties. In support of its position that demand response resources will be capable of responding to more granular sub-zonal dispatch when such sub-zones are identified during the operating day, PJM argued that curtailment service providers have had the opportunity to become familiar with day-ahead sub-zonal dispatch; i.e. when PJM defines sub-zones during the day before the operating day. However, EnergyConnect, et al., in their answer, point out that available data demonstrates that PJM and its market participants have had limited experience with voluntary day-ahead, sub-zonal dispatch requests, and argue that for a curtailment service provider with customers located across a variety of locations, or a single customer with a footprint larger than a sub-zone, implementation of same-day sub-zonal dispatch will be difficult and costly. We find that PJM has not adequately addressed this concern.

150. Specifically, we find that PJM has not demonstrated that the demand response resources which comply with day-ahead sub-zonal dispatch are capable of complying with sub-zonal dispatch on the operating day within the default 30-minute signal without imposing prohibitive costs on those resources. This proposed requirement would pose an additional burden on curtailment service providers, beyond the burden on both Emergency Load Response and Pre-Emergency Load Response to achieve a full load reduction within 30 minutes, which is a requirement that we accept as discussed above. PJM has not adequately addressed EnergyConnect, et al.’s argument that the compound effects of shorter notice and same-day, sub-zonal dispatch on the implementation costs of curtailment service providers associated with installation of automated equipment are prohibitive.41

151. We agree with intervenors that the experience with demand response resources under the voluntary, day-ahead program that PJM cites in its answer to the Deficiency Letter does not naturally demonstrate that these resources can comply with same-day, sub-zonal dispatch. Demand response resources incapable of responding to PJM’s sub-zonal dispatch would choose not to participate in the present voluntary program. Furthermore, the necessary technology for demand resources to comply with this

provision of PJM’s proposal is not widely available today;\textsuperscript{42} if it becomes more widely available in the future, that change could enable PJM to show that this aspect of the proposal is just and reasonable. Absent evidence that the burden associated with complying with same-day sub-zonal dispatch instructions is outweighed by the potential benefit to PJM’s operations, including a demonstration that a sufficient number of demand response resources are capable of complying with such instruction to provide the intended system benefits, we must reject this aspect of PJM’s proposal.

152. As we are rejecting this portion of PJM’s proposal, leaving the relevant current tariff rules in place, AEP et al.’s protest requesting a nodal dispatch is beyond the scope of this proceeding.

153. Finally, PJM initially proposed a one-year transition period for mandatory day of sub-zonal dispatch and, in its answer, offered to apply a transition mechanism through the 2016-17 delivery year. These implementation provisions are made unnecessary by the Commission’s rejection of this aspect of PJM’s proposal.

The Commission orders:

(A) PJM’s filing is hereby rejected, in part, and accepted, in part, as discussed in the body of this order, to become effective, as requested, on March 15, 2014, subject to conditions and the submission of a compliance filing, within 30 days of the date of this order, as discussed in the body of this order.

(B) PJM is hereby directed to submit a report to its stakeholders, after one year of operation under the revised rules accepted in this order, that describes the distribution of strike prices and notification times for demand response resources and how PJM handled their dispatch.

(C) Given PJM’s commitment to work with its stakeholders to develop a transition mechanism allowing curtailment service providers to be relieved of their obligations, under certain circumstances, as discussed in the body of this order, we direct PJM to file a timely report with the Commission addressing the status of its stakeholder negotiations.

(D) PJM is hereby directed to prepare and present to its stakeholders an annual informational report, as discussed in the body of this order, identifying the aggregate quantities of demand response resources for which an exception has been granted.

(E) PJM is hereby directed to submit an informational filing to the Commission, within nine months of the date of this order, providing an assessment of certain demand response dispatch data, as discussed in the body of this order, with input to be provided by the Market Monitor.

By the Commission. Commissioner Norris is dissenting with a separate statement attached.
Commissioner Clark is concurring with a separate statement attached.

( SEAL )

Kimberly D. Bose,
Secretary.
Appendix A

PJM Interconnection, L.L.C.
Intra-PJM Tariffs

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Appendix B

List of Intervenors

Achieving Equilibrium, LLC
American Electric Power Service Corporation (AEP, et al.) *
American Municipal Power, Inc.
Calpine Corporation
Comverge Inc. (Comverge, EnergyConnect, et al.) *
The Dayton Power and Light Company (AEP, et al.) *
Delaware Public Service Commission
Direct Energy Business, LLC and Hess Energy Marketing, LLC (EnerNOC, et al.) *
Dominion Resources Services, Inc.,
Duke Energy Corporation (Duke or AEP, et al.) *
Dynegy Marketing and Trade, LLC, et al.
Electric Power Supply Association (EPSA) *
EnergyConnect, Inc. (EnergyConnect, et al.) *
EnerNOC, Inc. (EnerNOC, et al.) *
Exelon Corporation (Exelon) *
FirstEnergy Service Company (AEP, et al.) *
Illinois Commerce Commission
Indiana Utility Regulatory Commission (Indiana Commission) *
NRG Companies (NRG) *
Maryland Office of People’s Counsel (Joint Consumer Advocates) *
Maryland Public Service Commission (Maryland Commission) *
Monitoring Analytics, LLC, acting as PJM’s independent market monitor (Market Monitor) *
NextEra Energy Generators
North Carolina Electric Membership Corporation
Nucor Corporation and Steel Dynamics, Inc. (Steel Producers) *
Organization of PJM States, Inc.
PHI Companies (PHI) *
PJM Industrial Customer Coalition (Industrial Customer Coalition) *
PJM Power Providers Group (P3) *
PSEG Companies (PSEG) *
Pennsylvania Office of Consumer Advocate (Joint Consumer Advocates) *
Pennsylvania Public Utility Commission
Public Utilities Commission of Ohio (Ohio Commission) *
Southern Maryland Electric Cooperative, Inc.
Wabash Valley Power Association, Inc.

* Entities submitting protests or comments, whether individually or jointly.
NORRIS, Commissioner, dissenting:

Today’s order largely approves PJM’s proposal to impose additional burdens on demand response resources as capacity resources in order to provide PJM additional operational flexibility. A key element of the proposal is to reduce the default notification time by which a demand response resource must perform when called by PJM from 120 minutes to 30 minutes. While I support PJM’s overall goal of increasing the operational flexibility of demand response resources, I conclude from the record in this proceeding that the 30-minute default notification requirement has not been shown to be just and reasonable, and I therefore dissent.

I am particularly troubled because PJM’s proposal represents the third major tariff filing recently approved by this Commission that collectively will have the impact of reducing demand response participation in PJM capacity markets.\(^1\) As several parties note, the changes in these three proceedings are interrelated, but PJM asks us to address them in silos. Moreover, the frequent rule changes proposed in these filings create significant regulatory risk. While my concerns below are focused on the 30-minute default notification requirement, we must also pause to understand the repercussions of all these changes as a whole in order to ensure that we continue to fully capture the benefits of demand response.

Through the proposed 30-minute default notification requirement, PJM seeks greater operational flexibility in order to achieve lower system operating costs. In the process, however, PJM’s proposal will impose a significant barrier on demand response resources’ participation in the PJM capacity market. Those demand response resources unable to meet this default notification requirement will be forced out of the market, resulting in higher capacity costs to consumers as PJM is forced to rely on other, higher cost resources. Demand response has repeatedly demonstrated its value in helping PJM meet system needs, but because some resources will be unable to meet the new

\(^{1}\) See *PJM Interconnection, L.L.C.*, 146 FERC ¶ 61,052 (Jan. 30, 2014) on limited and extended summer demand response participation, and *PJM Interconnection, L.L.C.*, 146 FERC ¶ 61,150 (Feb. 28, 2014) on demand resource plan enhancements.
performance requirement, such demand response will now be valued at zero and driven out of the market. In sum, PJM’s proposal has not been shown to be just and reasonable.

As was made clear from this past winter’s polar vortex weather events, PJM needs all the resources it can get to help ensure reliability, particularly during times of system stress. I fail to understand why the Commission through today’s order would sanction efforts to unnecessarily reduce the pool of potential resources at PJM’s disposal.

Further, PJM’s proposed 30-minute default notification requirement – even with the limited exceptions process – has not been shown to be comparable to lead time requirements for generation and is thus unduly discriminatory. Under existing rules demand response resources may select either a 60-minute or 120-minute notification time. In fact, 99.5 percent of demand response registrations for the 2013/2014 delivery year elected the 120 minute notification time.\(^2\) Under the proposal, PJM has acknowledged that demand response resources physically unable to respond within 30 minutes and that do not qualify for an exception will not be eligible to participate in the capacity market.\(^3\) In contrast, generators in PJM establish unit-specific response times based on their operating limitations. The PJM Industrial Customer Coalition further notes that nearly half the combustion turbines in PJM have start times in excess of 30 minutes,\(^4\) whereas steam units appear to have start times as long as six hours or more. PJM has not demonstrated that the 30-minute default notification time for demand response is comparable to lead times for generators.

Compounding the situation, PJM only proposes a one-year transition mechanism such that demand response resources with existing capacity commitments through the 2016-17 delivery year will still be subject to the new notification requirement. In response to concerns that these resources may not be able to comply, today’s order does not require PJM to develop a mechanism that accommodates these commitments and instead notes that nothing limits PJM’s statutory filing rights to propose rule changes. This inaction undermines existing contractual relationships and creates uncertainty for investment decisions.

Today’s order will provide additional operational flexibility to PJM as the grid operator, but at the expense of imposing additional barriers on demand response that are not comparable to the requirements generators face and that are likely to prove more


\(^3\) See PJM March 12, 2014 Response to Deficiency Letter at 5.

\(^4\) See PJM Industrial Customer Coalition January 14, 2014 Comments at 8.
costly to consumers. PJM has not shown that its proposal is just and reasonable and it therefore should be rejected.

For these reasons, I respectfully dissent.

John R. Norris, Commissioner
CLARK, Commissioner, concurring:

I support today’s order as a step in the right direction for the treatment of demand response with capacity market commitments. The creation of a Pre-Emergency Load Response Program and a default 30-minute notification period unleashes demand response from the constraints of an emergency-only product and allows system operators to more flexibly use demand resources to the betterment of system reliability. These incremental improvements reflect a proactive climate in PJM that aims toward progress, but at the same time it is clear that PJM’s work on this issue is far from over.

The Commission has outlined several “next steps” for PJM in this order, particularly with regard to behind-the-meter generation and offer price stratification. The overriding message is that PJM’s proposal is better than the status quo and is just and reasonable, but the question that remains is whether PJM’s proposal went far enough. Accordingly, we have established a compliance requirement for PJM on the behind-the-meter generation exemption and a reporting requirement on offer price stratification.

The purpose of the reporting requirement is to gather more information on the role and effects of demand response capacity resources in the energy market. I encourage PJM and the Market Monitor to work constructively to identify the issues that have yet to be resolved by this filing and to provide the Commission with feedback and data that we can use to assist PJM in coming to the right balance on the use of demand response in the PJM markets. If there is a market power concern and if the shortage pricing signal is still being overridden by demand response strike prices, then it is imperative for us to deal with this reality and actively work toward an appropriate solution. The same goes for the comparability of performance requirements across resource classes; if resources are being paid comparably for their capacity, then we should strive to ensure that the services provided by those resources are as comparable as possible. PJM is driving to that end in this filing and I encourage it to continue to propose reforms that it believes are necessary to guarantee that consumers are receiving the reliability for which they are paying.

For these reasons, I respectfully concur with this order.

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Tony Clark
Commissioner