

129 FERC ¶ 61,090
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Sudeen G. Kelly, Marc Spitzer,
and Philip D. Moeller.

PJM Interconnection, L.L.C.

Docket Nos. ER05-1410-000
EL05-148-000
ER09-412-006

ORDER ACCEPTING FILING SUBJECT TO CONDITIONS
AND CANCELLING TECHNICAL CONFERENCE

(Issued October 30, 2009)

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1. In this order, the Commission accepts, subject to conditions, a filing made by PJM Interconnection, L.L.C. (PJM) to institute an automatic mechanism to update its cost of new entry calculations to become effective November 1, 2009, and a filing in compliance with the Commission’s orders issued on March 26, 2009 and August 14, 2009, also to become effective on November 1, 2009 as requested by PJM. We also cancel a previously-announced technical conference.

I. Background

A. Changes to RPM

2. PJM operates its Reliability Pricing Model (RPM) capacity market, under which PJM purchases capacity on a multi-year forward basis through an auction mechanism. The prices for capacity are determined by these forward auctions. To date, PJM has conducted six Base Residual Auctions, which have determined the level of capacity and prices for Delivery Years 2007-2013. PJM's most recent Base Residual Auction was conducted in May 2009 to procure capacity for the 2012-2013 Delivery Year.

3. On December 12, 2008, PJM made a filing under section 205 of the Federal Power Act (FPA) in which it proposed significantly to revise the RPM capacity market. PJM subsequently amended that filing on February 9, 2009. Among other things, PJM sought to revise its calculation of the gross Cost of New Entry (CONE) parameter, which is designed to represent the cost of constructing a new generation resource.

4. PJM further proposed, in its February 9 amendment, to engage in a stakeholder process aimed at developing an automatic adjustment procedure for CONE and committed to make a filing under section 205 of the FPA with an automatic adjustment procedure. PJM also sought to alter certain aspects of the RPM incremental auctions.¹

¹ Under RPM, PJM conducts a Base Residual Auction three years ahead of each Delivery Year, but also conducts three incremental auctions during that three-year period. In the December 12 filing, PJM proposed to alter the design of these incremental auctions in various ways, including revising the provisions governing capacity provided by short lead time resources.

5. The Commission largely accepted PJM's proposal, but placed certain compliance obligations on PJM.² PJM made its filing to establish the automatic adjustment procedure and its compliance filing on September 1, 2009.

B. Notice of Filing and Responsive Pleadings

6. Notice of the September 1, 2009 filing was published in the *Federal Register*, with motions to intervene, notices of intervention, comments and protests due on or before September 22, 2009.³ NRG Companies, IPA Central, Comverge, Inc., Constellation Power Source Generation, the Public Power Association of New Jersey (PPANJ), the Pennsylvania Public Utility Commission, Consolidated Edison Energy, filed timely motions to intervene. Monitoring Analytics, Inc. (the PJM Market Monitor), Mirant *et al.*,⁴ Pepco Holdings, Inc. (PHI), Dayton Power and Light Co. (Dayton), the PPL Parties (PPL), RRI Energy (RRI), Old Dominion Electric Cooperative and North Carolina Electric Membership Corporation (ODEC), PJM Load Group,⁵ PSEG Companies (PSEG), Rockland Electric Company (Rockland), Constellation Parties (Constellation) filed protests or comments. The Illinois Commerce Commission (Illinois Commission) filed comments out of time. PJM filed two answers to the protests. Its first answer, filed on October 7, 2009, answered the protests filed by all parties except the Illinois Commission. Its second answer, filed on October 14, 2009, answered the Illinois Commission's protest.

II. Procedural Issues

7. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2009), the notice of intervention and the timely-filed unopposed motions to intervene serve to make the entities filing them parties to this proceeding. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2009), the Commission will grant the Illinois Commission's late-filed

² *PJM Interconnection, L.L.C.*, 126 FERC ¶ 61,275 (2009) (March 26 Order); *order on clarification and reh'g*, 128 FERC ¶ 61,157 (2009) (August 14 Rehearing Order).

³ 74 Fed. Reg. 46,764 (2009).

⁴ The Mirant Parties, FPL Energy Generators, Edison Mission Energy and IPA Central, LLC.

⁵ Allegheny Electric Cooperative, Inc.; American Municipal Power, Inc.; ArcelorMittal USA, Inc.; Duquesne Light Company; the PJM Industrial Customer Coalition; and the Portland Cement Association.

motion to intervene, given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

8. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2009), prohibits an answer to a protest or an answer unless otherwise ordered by the decisional authority. We will accept PJM's two answers, because they have provided information that has assisted us in our decision-making process.

III. Discussion

A. Automated CONE Procedure

1. PJM's Proposal

9. The CONE parameter of RPM is the nominal levelized cost of a reference resource, where a reference resource is a combustion turbine generating station, configured with two General Electric Frame 7FA turbines. The value of CONE is an important component of many parts of RPM design, most prominently in setting the height of the Variable Resource Requirement Curve (VRR curve) used to clear the Base Residual Auction. Ideally, the administrative value of CONE should be a reasonable approximation of the "true" value of CONE, that is, the lowest capacity payment required to foster the market-based investment in a new reference resource. In its February 9 amendment to its original filing, PJM stated that it was planning to convene a stakeholder process to develop an automated CONE adjustment procedure, which would supersede the existing provision regarding formulaic changes to CONE in the tariff,⁶ as well as the existing provisions as to the triennial review of the shape and parameters of the Variable Resource Requirement (VRR) curve, including CONE.⁷ PJM committed in the filing accepted by the Commission that, no later than September 1, 2009, PJM would file an automated Net CONE adjustment procedure with the Commission as a PJM tariff change under section 205 of the FPA, either as a consensus proposal if stakeholders could reach consensus, or, absent consensus, as a filing by PJM alone.⁸

⁶ PJM tariff, Attachment DD, section 5.10(a)(iv)(B).

⁷ PJM tariff, Attachment DD, sections 5.10(a)(vii)(C) ("At least every three years, the Office of the Interconnection shall review the calculation of the Cost of New Entry for the PJM Region and for each Zone. 1) If the Office of the Interconnection determines that the Cost of New Entry values should be modified, Staff of the Office of the Interconnection shall propose new Cost of New Entry values") and (D).

⁸ February 9, 2009 amendment to original filing in Docket No. ER09-412-000 at 11 (February 9 amendment).

10. The Commission supported PJM's proposal to file an automated CONE provision, finding that the current process used by PJM was too complex:

As has been amply demonstrated in the proceedings leading up to the December 12 filing and the February 9 filing, and the comments filed here, the current process of making adjustments to CONE based on cost estimates and projections is difficult and complex, leading to disputes over cost assumptions as well as the need for predicting future costs leading up to the Delivery Year. This process is more difficult than the typical rate case based on an existing rate base, because there are no accepted accounting numbers with which to begin the analysis and the cost projection is for the future, not the present. Moreover, because of the need for certainty in the RPM auction, the normal section 205 process of suspending the filing, subject to refund, while a hearing is conducted is often not available. When a utility makes its filing on short notice (as in this case), hearing procedures for such cost data become even more impractical. Once an automated process is approved, we anticipate that the process of adjusting CONE will become smoother and less contentious, and the stability of the capacity market will benefit thereby.⁹

11. PJM is now proposing to revise its automated CONE procedure in two ways. First, it proposes to use the Handy-Whitman Index of Public Utility Construction Costs (Handy-Whitman Index) to update CONE each year. Second, it proposes to replace its current provision for triennial review of CONE with a different procedure, which will be implemented every four years.

a. Use of the Handy-Whitman Index

12. PJM is revising section 5.10(a)(iv)(B) to eliminate the current "empirical" CONE provision¹⁰ and replace it with a new provision that adjusts CONE (up or down) each

⁹ March 26 Order, 126 FERC ¶ 61,275 at P 63.

¹⁰ Empirical CONE is the weighted average for all LDAs in the CONE Area (weighted by load in such LDAs) of: (i) the average Capacity Resource Clearing Price in each such LDA determined in the Base Residual Auctions for such three Delivery Years; plus (ii) the average of the Net Energy and Ancillary Market Revenue Offsets used in the Variable Resource Requirement Curve for such LDA for such three years.

year proportionately to the applicable Handy-Whitman Index.¹¹ PJM asserts that its proposal is just and reasonable because the Handy-Whitman Index is transparent, easily reproducible and readily available. PJM also states that the Handy-Whitman Index will promote stability, since it has not historically experienced dramatic real-price changes from year to year.

13. PJM states that the Handy-Whitman Index is a widely-used utility cost index published since 1924 that tracks costs based on the Commission's Uniform System of Accounts for electric plant and related plant items, and includes separate indices for different plant types and different regions of the country. In particular, the Handy-Whitman Index tracks construction costs for combustion turbine generation plants in defined regions of the country. PJM states that it will make clear which index will be used for each CONE area¹² in its manuals, and that calculating the new CONE value for each area requires only the application of the percentage change in the index over the most recent twelve months to the previous CONE area, so that these changes will be easily reproducible by third parties.

14. PJM proposes that, for every delivery year¹³ and for each CONE Area within PJM, it will adjust the CONE used in the Base Residual Auction in the prior delivery year by the most recent twelve-month rate of change in the applicable Handy-Whitman Index, determined at the time the CONE must be posted for that delivery year's Base Residual Auction.¹⁴

15. PJM also proposed section 5.10(a)(vii)(C), which states that in addition to relying on the Handy-Whitman Index for annually updating CONE values, PJM will not be

¹¹ The index is published by Whitman, Requardt & Associates, LLP (WRA), an architectural/engineering consulting firm based in Baltimore.

¹² CONE Areas are the three regions within PJM. Broadly speaking, CONE Area 1 consists of the New Jersey/Delaware area, CONE Area 2 consists of the Maryland and Washington, DC area, and CONE Area 3 consists of the western and southern parts of PJM in Ohio, Illinois, and Virginia (*see* PJM Tariff, Attachment DD, section 5.10(a)(iv)(A)).

¹³ A delivery year is a twelve-month capacity delivery period beginning on June 1 of a calendar year and ending on May 31 of the following year.

¹⁴ PJM states that, as revised, section 5.10(a)(iv) also clarifies that the CONE is subject to change pursuant to appropriate filings with the Commission, under which PJM can make a new proposal at any time, or any filing to establish new or revised CONE Areas.

precluded from making a filing with the Commission under section 205 at any time to change the shape of any parameters of the VRR Curve, including, but not limited, to the CONE value for any CONE area.

b. Use of a Four-Year Review to Replace the Triennial Review

16. PJM proposes to replace the existing triennial review procedures in section 5.10(a)(vii)(C) with a four-year review process, which will compare the resultant CONE values determined through the Handy-Whitman Index with a benchmark determined through the review of cleared and some uncleared offers of units similar to the reference unit in the four previous Base Residual Auctions.

17. Specifically, after the Handy-Whitman Index adjustment method has been in place for four Base Residual Auctions, and every four years thereafter, PJM proposes to conduct a comprehensive review of CONE based on (i) clearing prices in those RPM auctions that cleared new entry offers, and (ii) the offers for new entry by resources of the same type as the then-effective reference resource submitted in the four preceding Base Residual Auctions. Offers of new entry that do not clear will be considered only if PJM judges them to be “competitive,” as determined by PJM. Under PJM’s proposal, offers will be deemed non-competitive if, among other reasons, any portion of the offer includes uncompetitive aspects such as direct subsidies, preferential financing, or feed-in tariffs (an incentive payment structure to encourage the adoption of renewable energy). PJM explains that, with regard to the use of new entry to define CONE, it must meet the challenges of using both new entry offers that clear, and those that do not. It states that using both cleared and uncleared offers should provide the broadest survey of the likely real costs of new entry, while excluding uncleared offers would skew the data, ignoring the legitimate costs of some projects. PJM states that using only cleared offers would require extrapolation from limited data.

18. PJM states that the auction-based analysis shall be completed within three months after the last Base Residual Auction included in the study. If the analysis calculates a CONE value (taking into consideration the Net Energy and Ancillary Services Revenue Offsets during the period of such analysis) that is within ten percent of the CONE value expected (based on the latest Handy-Whitman Index data) for the next Base Residual Auction, then no other adjustment will be required. In that case, the Handy-Whitman Index approach will simply continue to govern annual changes to CONE.

19. However, if the auction-based analysis indicates a change of more than ten percent for any CONE Area, then PJM will institute a process leading to the filing of a change to the tariff under section 205 to propose new CONE values for all CONE Areas, and also will undertake a review of the plant type assumed for the reference resource (e.g., from a combustion turbine to a combined cycle). In those circumstances, PJM

proposes also to commission an independent estimate, by an outside expert, of the fixed costs to install a new entry generator, so as to provide stakeholders additional information on the current cost of new entry.

2. Comments and PJM's October 7 Answer

a. Use of the Handy-Whitman Index

20. In general, most commenters support the use of the Handy-Whitman Index to update CONE (PHI, Constellation, RPM Load Group, Rockland, PSEG, the Market Monitor, RRI, Mirant, and the Illinois Commission). They support use of the Handy-Whitman Index as a reasonable and objective mechanism to update CONE that will provide stability and predictability. They note that it has independent significance, meaning that it was not developed for RPM purposes and therefore is not biased against any particular RPM market participant. Others note its wide acceptance as a cost index tailored to the electric industry and term it the best available estimator for annual changes in the Cost of New Entry.

21. Some parties, however, also state that PJM has not provided sufficient information as to how it would conduct the statistical analysis that it proposes to conduct (Rockland, RRI, Illinois Commission). The RPM Load Group states that PJM had not provided sufficient information as to how the Handy-Whitman Index was calculated, whether use of the Handy-Whitman Index would be free of conflicts of interest, what data points the Handy-Whitman Index used, and which specific geographical Handy-Whitman indices would be used. Rockland also questions how PJM will use region-specific indices and whether they fit with the Tariff-defined CONE Areas. Rockland states that it is critical that the Commission ensure that PJM fully explain its use of the Handy-Whitman Index, and that PJM should be required to average the Handy-Whitman Index over a three-year period, to minimize volatility in CONE prices.

22. The Illinois Commission supports the use of the Handy-Whitman Index. It states, however, that using construction data will cause continued upward pressure on CONE as the economy recovers, and that RPM will, therefore, continue not only to procure excessive amounts of capacity, but to pay too much for those amounts.

23. In its October 7 answer, PJM states that the Commission approved an increase to the cost of new entry used by the New York Independent System Operator, Inc (NYISO) as part of a recent triennial review of the CONE parameter used in NYISO's capacity market. To ensure that the CONE would remain up-to-date until the next triennial review, the NYISO proposed an annual escalation factor to set CONE for the two interim years, based on changes in the Handy-Whitman Index. PJM states that although some parties had objected to use of the Handy-Whitman Index as an escalation factor in

NYISO, the Commission expressly approved it, finding it “reasonable to rely on the Handy-Whitman Index as it is an index specifically tailored to the utility industry.”¹⁵

24. In response to the RPM Load Group’s and Rockland’s request for more information as to how the Handy-Whitman Index is calculated, PJM states that it intends to identify in its manuals that it will use the “Other Production Plant” index. PJM also specifies that it intends to rely upon the indices that WRA separately publishes for the “North Atlantic Region” and the “North Central Region.”¹⁶ PJM argues that this level of detail is more appropriate for the manuals, and that it should not be required to file a tariff change, for example, simply because WRA changes the name of one of its indices.

25. With respect to questions about the role that PJM market participants may play in WRA’s data collection, PJM states that some components of the index calculation are based in part on information from utilities. PJM states that it does not know if this includes contact with any PJM market participants, but, even if any PJM market participants provide any inputs to the Handy-Whitman Index, their role would be indirect, at most, given that the index results from a compilation and review by independent consultants of data from many sources.

26. The Illinois Commission further argues that RPM has improperly focused on driving a capacity price that approximates the revenue requirement to construct a new natural gas combustion turbine, despite the increases in demand resources, renewable resources, and price responsive demand that have occurred since RPM's inception. The Illinois Commission states that, as a result, load within PJM continues to pay too high a price for excessive amounts of capacity. The Illinois Commission therefore asks the Commission to re-examine the RPM model and address this problem.

¹⁵ PJM October 7 answer at 6, *citing New York Independent System Operator, Inc.*, 122 FERC ¶ 61,064 at P 54, *order on reh’g*, 125 FERC ¶ 61,299 (2008).

¹⁶ As defined by WRA, the North Atlantic Region is comprised of Delaware, Maryland, New Jersey, Pennsylvania, West Virginia, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont, and Maine. The North Central Region is comprised of Ohio, Indiana, Michigan, Illinois, Wisconsin, Missouri, Iowa, Minnesota, Kansas, Nebraska, South Dakota, and North Dakota. Therefore, PJM argues that the North Atlantic Region index should provide a more refined generator-cost measure (compared to a national-average cost index) for PJM’s CONE Areas 1 and 2, which include all or parts of the States of Delaware, Maryland, New Jersey, and Pennsylvania, and the District of Columbia. And, according to PJM, the North Central Region index similarly should provide a more focused view of generator construction costs (again, compared to a national average) for PJM’s CONE Area 3, which includes parts of the States of Ohio, Indiana, Michigan, Illinois, Virginia, and West Virginia.

b. Use of a Four-Year Review to Replace the Triennial Review

27. Most commenters oppose PJM's proposal to revise the existing triennial review of the CONE process,¹⁷ which currently relies on PJM's staff to propose new CONE values, with a process that would instead rely on past auction data to adjust CONE. Some commenters, such as the Market Monitor, argue that the past auction data provides a small pool of new entry data, which, in addition, may be stale by the time of the analysis and not applicable to the future CONE values. Others (Mirant, PPL) argue that PJM should not rely on prior auction clearing prices, because they are not relevant to the question at hand regarding CONE – namely, whether it approximates the cost of constructing a new resource.

28. Yet others state that PJM's proposal is unworkably vague. RRI objects that PJM has not explained whether it will consider all auctions with cleared new entry offers, or only those auctions that clear offers from new resources that are the same as the then-effective reference resource. RPM Load Group, ODEC, RRI and Dayton assert that PJM has not provided enough information as to how it will determine when an uncleared offer is competitive, or whether that determination will be made by PJM or the Market Monitor. They argue that the filing also fails to specify how uncleared offers will be weighted against cleared offers. ODEC and Dayton further state that offers intended to manipulate the market, such as those resulting from a high-bid strategy that is intended to falsely increase the clearing prices for capacity, must be excluded from the CONE analysis, and stress that the objective criteria for determining whether offers are competitive must include a screen to ensure that market power cannot be exercised through manipulative strategies such as high bidding. Constellation suggests that these problems could be resolved by: (i) the use of a consultant who would study new-entry data to ensure it was appropriately used to change CONE; (ii) PJM's development of a list of characteristics that would cause an offer to be considered uncompetitive; and (iii) the use of a default assumption that an offer is uncompetitive, absent an affirmative showing to the contrary.

29. PSEG argues that PJM's proposal is not clear with regard to certain elements of the four-year periodic review mechanism, including the statistical analysis of new entry data, procedures for excluding cleared bids that do not appear to be competitively based, and the role of the proposed engineering study of the gross CONE value when there is robust market data.

30. Mirant asserts that the Commission should require PJM to make an informational filing of its auction analysis each year, even if the deviation between the Handy-Whitman

¹⁷ PJM tariff, Attachment DD, sections 5.10(a)(vii)(C) and (D).

Index and CONE is less than 10 percent. Mirant further argues that an independent consultant's perspective as to the appropriate value of CONE should also be presented to the stakeholders at the same time that PJM's CONE analysis is presented to them, so that they can compare both approaches. Rockland states that, if PJM hires an outside consultant to assist in adjusting CONE in these circumstances, it should be required affirmatively to demonstrate that market data is insufficient for this purpose, since PJM will by that point have several years of market data.

31. The RPM Load Group asserts that PJM has now completed enough Base Residual Auctions and has enough auction clearing results that a downward adjustment to CONE can be made in the near-term, prior to the May 2011 auction. The RPM Load Group asserts that, as a long-term solution, CONE should be adjusted using an index that tracks actual and relevant auction-clearing offers averaged over the preceding two-year period, so as to provide for an automated update to CONE and link CONE more directly to actual RPM outcomes and regularly align CONE values with actual market dynamics. Rockland similarly states that PJM should complete its review of CONE within the next two years.

32. The RPM Load Group also states that PJM proposes to account in its four-year CONE adjustment process for an Energy and Ancillary Services Offset, but does not provide the level of detail necessary to determine how this offset adjustment will occur.

33. In its October 7 answer, PJM provides some additional details regarding its proposal. PJM states that it will only consider auction-clearing prices when a new entry offer of the same generator type as the reference resource (currently, a combustion turbine plant) is the marginal, price-setting resource. PJM argues that the costs of a marginal peaking unit are exactly the costs that PJM's various administrative CONE estimates in recent years have sought to portray, i.e., the cost to bring on line the last increment of capacity needed to satisfy the region's (or Locational Deliverability Area's) reliability needs. PJM adds that as clearing prices set by a marginal combustion turbine provide a market demonstration of the very costs that are intended to define RPM's VRR Curve, PJM clarifies that clearing prices meeting these conditions will be afforded extra weight, relative to the other cleared (infra-marginal) and uncleared (supra-marginal) new entry offers.

34. PJM also asserts that there is no need for it to provide a definition of uncleared competitive offers, and that a better approach is for PJM to identify any problems based on the actual offers, and to defend, in the section 205 proceeding, its decisions to include or exclude any such offers, based on the evidence.

35. In addition, PJM states that, given that no CONE values resulting from this process can take effect without the Commission's section 205 review, the additional details about the statistical analysis of new entry data requested by some comments are unnecessary. PJM argues that it will make these types of choices based on the data

actually available at the time, and will have to defend those choices as part of its demonstration in the section 205 proceeding that the filed CONE values are just and reasonable.

36. Finally, PJM answers the argument that the first comprehensive review of CONE should be in two years, rather than in four, as it proposed. PJM argues that the Commission just approved new CONE values in March of this year, so there is no pressing need for a review of CONE after only two years.

3. Commission Ruling

37. We will accept PJM's proposal for a new automated CONE adjustment process, subject to conditions, to become effective November 1, 2009. In its February 9, 2009 amendment to its original December 12, 2008 filing, as part of an agreement with its stakeholders,¹⁸ PJM committed to making a section 205 filing to implement an automatic CONE adjustment,¹⁹ and we accepted its commitment to do so. We therefore will treat this aspect of PJM's filing as a section 205 filing under the FPA.²⁰

a. Use of the Handy-Whitman Index

38. We will conditionally accept PJM's proposal to eliminate the empirical CONE provision and replace it with a new provision that adjusts CONE each year in accordance with changes in the Handy-Whitman Index. We find that PJM's proposal accomplishes

¹⁸ The February 9 amendment was submitted as a partial settlement, which the Commission considered to "constitute[] an amendment by PJM of its original December 12 filing," March 26 Order, 126 FERC ¶ 61,275 at P 20.

¹⁹ PJM's February 9 filing provides at 11 that "no later than September 1, 2009, PJM shall file an automated Net CONE adjustment procedure with the Commission as a PJM Tariff change under Section 205 of the FPA, for implementation beginning with the Base Residual Auction conducted for the 2013-2014 Delivery Year."

²⁰ Under our regulations, it is not generally appropriate for PJM to include a new section 205 filing as part of a larger compliance filing, without distinguishing between the two. *See* Procedures for Changing Tariffs, 18 C.F.R. § 385.203(b) (2009) ("Filings made to comply with Commission orders must include only those changes required to comply with the order. Such compliance filings may not be combined with other rate or tariff change filings. A compliance filing that includes other changes . . . may be rejected"). However, we will act on PJM's section 205 proposal here, on the basis of PJM's prior clear commitment that it would be making this proposal under section 205 of the FPA.

the basic goals that the automated net CONE adjustment mechanism should achieve. As we stated in our March 26 Order, “the current process of making adjustments to CONE based on cost estimates and projections is difficult and complex, leading to disputes over cost assumptions as well as the need for predicting future costs leading up to the Delivery Year.”²¹ The Handy-Whitman Index supplies a known and unbiased adjustment factor to change CONE values in years that are not subject to a full review, and is supported by a wide range of PJM stakeholders. Because CONE values can be expected to be determined based upon a known and unbiased formula, market participants will gain a higher degree of certainty regarding forecasted CONE values. In turn, this should facilitate capacity market stability that will foster the locational construction of new resources and promote conditions conducive to long-term contracts for capacity resources. Further, contrary to the arguments made by the RPM Load Group, we do not find any evidence that market participants will be able to influence the Handy-Whitman Index values, since the data is collected and verified by an independent group of consultants, whose reports have been used in the marketplace by both buyers and sellers of electric power for a period of several decades.

39. However, we note that while the proposed tariff states that the applicable Handy-Whitman Index shall be based on the most recently published twelve-month change in the index, it leaves further details of the specific index, such as its geographic location and the exact type of index, in the manuals. PJM has proposed these clarifications in its Answer, and argues that these details should be left for inclusion in its manuals. The use of the Handy-Whitman Index is a formula rate and the tariff provision needs to describe the methodology being used in determining the CONE value. While the intricacies of the calculations do not need to be in the tariff, the tariff needs to adequately describe the data being employed under the formula in the tariff. We therefore will accept PJM’s proposal on condition that PJM revise its tariff to describe in more detail how it will use the Handy-Whitman Index, including the geographic locations of the specific indices to be employed, and the resource category (ies), that PJM will use.

40. Rockland argues that PJM should be required to average the Handy-Whitman Index over a three-year period, so as to minimize volatility in CONE prices. We find PJM's proposal to be just and reasonable, since it resets the CONE values based on the most accurate data available. A three-year average would introduce a substantial time lag, since CONE values are used for setting VRR Curves in the three-year forward auctions and this will make the Index less useful and reliable.²²

²¹ March 26 Order, 126 FERC ¶ 61,275 at P 63.

²² Some volatility in the cost of construction of a new combustion turbine was indicated by PJM in its initial filing. *See* "2008 Update of Cost of New Entry Combustion Turbine Power Plant Revenue Requirements For PJM Interconnection,

41. We also reject the Illinois Commission's arguments that using construction data will cause continued upward pressure on CONE. As PJM explained in its filing, the proposed tariff will allow for both upward and downward adjustments to CONE, depending on the market conditions.

b. Use of the Four-Year Review Period

42. However, we share protesters' concerns with flaws in the tariff provisions regarding the four-year review of CONE values. Under this procedure, every four years PJM will examine cleared and competitive uncleared new entry offers for the prior four auctions and compare these with the updated CONE calculations. If a deviation of more than 10 percent exists between the two, PJM is required to "institute a process to change the CONE values for all CONE Areas through a Tariff filing with FERC, to be effective in time for the next Base Residual Auction..." PJM, however, has not identified what criteria will be used to determine what cleared and uncleared offers PJM will examine, whether and how offers from resources other than combustion turbines will be considered, and, perhaps most important, the criteria used to determine whether an uncleared offer is "competitive." PJM also has not explained why the use of four years of past data from a potentially small sample is sufficiently accurate so as to warrant a requirement to make a section 205 filing.

43. Moreover, PJM has retained its current provisions that permit it to review and make a section 205 filing to change CONE whenever it determines that the CONE values resulting from the automatic adjustment are not sufficiently accurate. PJM has not explained why the new four year review process is necessary in light of its existing tariff provision that already permits it to make a section 205 filing based on appropriate criteria.

44. We will therefore accept PJM's automatic adjustment filing, under the condition that PJM either remove the four-year review provision, or file revised tariff sheets that better explain what offers it will be considering in the analysis, how it will determine "competitive offers," and explains the relationship between this four-year review provision and PJM's existing tariff authority to make a section 205 filing. If PJM removes the four-year review provision, its current triennial review provision will remain in effect.

45. PJM also has proposed, under the four-year review proposal, that it will make a section 205 filing in time for the next Base Residual Auction. Although we recognize PJM's right to make a section 205 filing if it determines that the automatic adjustment

LLC" at 5-6, accompanying report to affidavit of Michael J. Fox, Attachment B to PJM's original December 12, 2008 filing.

based on the Handy-Whitman Index is inadequate, our concerns with having to process such a contested filing on a short turnaround, without hearing procedures, remain. The adoption of the improved automatic adjustment procedure should mitigate potential harm to the market of any delays resulting from the adoption of hearing procedures. Therefore, in the event PJM seeks to make a section 205 filing under its existing process, it and the parties should understand that they run the risk that we may find that a suspension of such a filing, subject to the normal hearing procedures of the FPA and possibly subject to refunds, is necessary.

46. The Illinois Commission also maintains that the Commission should review the use of a combustion turbine as the reference resource for CONE and argues that PJM ignores the increases in demand resources, renewable resources, and price responsive demand that have occurred since RPM's inception. The Illinois Commission therefore asks the Commission to re-examine the RPM model and address this problem.

47. The use of the combustion turbine as the reference resource is already a part of PJM's tariff, and any changes to the reference resource are beyond the scope of this filing. Moreover, as part of PJM's current tariff, PJM is free to review the choice of reference resource for determining CONE and choose another resource if PJM finds that resource more appropriate. The Illinois Commission, and the other stakeholders, are also free to work through the current process to determine the most appropriate reference resource. Nothing in this order, however, requires such reviews.

B. Holdback for Short Lead Time Resources

1. PJM's Proposal

48. In its December 12 filing, in order to enable resources that cannot feasibly commit far enough in advance of the Delivery Year to participate in RPM, PJM proposed to revise its incremental auction rules to deduct from the Base Residual Auction a short-term resource procurement target, or "hold-back" amount, of 2.5 percent of the Reliability Requirement, and it proposed to procure one-third of that hold-back in each of the three incremental auctions. The Commission accepted the 2.5 percent holdback mechanism, but stated:

PJM currently proposes simply to procure one-third of the "hold-back" in each of the three incremental auctions following the Base Residual Auctions. The Commission does not, however, consider this sufficient to ensure that those short-lead-time resources that are not able to submit offers into the Base Residual Auction or, in some cases, even into the first two incremental auctions, are able to participate in the capacity market. We will therefore accept this provision, subject to PJM revising the allocation of the 2.5 percent hold-

back so that a substantial amount of short lead time resources has a reasonable opportunity to be procured in the final incremental auction.²³

49. In compliance with this condition, PJM now proposes that, of the total 2.5 holdback amount, it will procure .5 percent in the first incremental auction, .5 percent in the second incremental auction, and the remaining 1.5 percent in the third incremental auction.

2. Comments

50. While some parties stated that they continued to oppose the concept of a holdback amount for short lead-time resources, no party opposed the revised allocation of the 2.5 percent holdback proposed by PJM.

3. Commission Ruling

51. We find that the revision to sections 2.65A and 2.65B comply with the Commission's condition, as it provides an opportunity for greater amounts of short-term resources to be procured in the final incremental auction. We therefore accept the proposed tariff language with no further modifications.

C. Incremental Auction Procedures

1. Commission's March 26 Order

52. Prior to PJM's original December 12 filing, RPM included a means to procure additional capacity in an incremental auction if PJM underestimated loads in the Base Residual Auction. However, RPM had no mechanism to respond to a decrease in the load forecast, or other circumstance under which the Base Residual Auction had procured more capacity than needed.

53. To respond to concerns that this mechanism could result in its procuring more capacity than necessary, PJM sought to address both under-procurement and over-procurements in its three incremental auctions. PJM proposed to update the regional and Local Delivery Area Reliability Requirements before each of the three scheduled incremental auctions. If the updated Reliability Requirement differed, in either direction, from the most recent prior Reliability Requirement used to set or adjust capacity procurement levels, then PJM would seek in the upcoming incremental auction either to buy additional commitments of capacity, or "sell back" capacity commitments, i.e., allow capacity resources to buy out of their prior commitments.

²³ March 26 Order, 126 FERC ¶ 61,275 at P 85.

54. In its December 12 filing, PJM made significant changes to the incremental auction procedures to closely reflect recommendations made by its consultant, the Brattle Group. Specifically, PJM proposed to: 1) expand the role of each Incremental Auction so that all auctions could provide both a forum for market participants to obtain replacement capacity and a means for PJM to adjust previously committed capacity levels; 2) allow opportunities for previously committed sellers to buy out of their commitments;²⁴ 3) add the "tail" of the VRR Curve (the increment of capacity not obtained in the Base Residual Auction) to the Incremental Auction clearing; and 4) adding a Conditional Incremental Auction that would be triggered if additional capacity is needed because a previously assumed transmission project will not be in service for the Delivery Year as expected.

55. In the March 26 Order, the Commission accepted PJM's revised incremental auctions framework. The Commission found in its August 14 Rehearing Order, however, that

PJM needs to clarify and ensure consistency of the provisions of sections 5.4, 5.10, and 5.12 of the tariff, and therefore conditionally [the Commission accepts] the filing while requiring PJM to provide a better explanation of these provisions in its September 1, 2009 filing. For instance, the precise conditions that would trigger procurement or sale of capacity by PJM in relation to updates of the Reliability

²⁴ For example, assume that a capacity resource is committed to provide 100 MW of capacity to PJM, is guaranteed in return to receive \$30/MW in capacity payments, and anticipates that its costs to provide capacity will be \$20/MW. Thus, if the capacity commitment is carried out, the resource will net \$10/MW. But if PJM no longer needs that 100 MW of capacity, PJM can negotiate with the resource to sell its commitment back to it for any amount between \$30 and \$10. If PJM and the resource come to agreement at \$15/MW, both parties benefit: PJM will not have had to pay \$30 to the resource for capacity it does not need, and will instead only pay \$15 to terminate its obligation to make capacity payments; the resource, on the other hand, will not have to expend \$20 to provide the capacity, and will therefore net the entire \$15 payment, rather than \$10.

PJM further notes that "a previously committed seller may wish to be released from its commitment if . . . it has found a more lucrative capacity export, or if it has determined that it will be unable to deliver committed new capacity for the Delivery Year" and that "[s]uch parties would compete with one another by offering to pay the highest amount in order to be released from their obligations." September 1 Transmittal at 22, citation omitted.

Requirement and capacity already procured were not clearly described.²⁵

56. The Commission therefore accepted the filing on the condition that PJM provide a better explanation of these provisions in its September 1, 2009 filing. Additionally, the Commission deferred ruling substantively upon a request for rehearing by the Illinois Commission of this aspect of the March 26 Order, until after PJM makes this September 1, 2009 compliance filing. The Commission stated that it would then rule on whether PJM's new tariff provisions "have sufficiently clarified and explained PJM's procedures," and at that point the Illinois Commission could "either choose to file comments to PJM's compliance filing, or to renew this pending request for clarification or rehearing."²⁶ The Commission also stated its expectation that PJM will respond in this filing to the Illinois Commission's contentions "that PJM's provisions are not just and reasonable because they discriminate between purchasing and selling capacity in the situation in which the actual amount of capacity procured deviates from an updated reliability estimate."²⁷

2. PJM's Proposal

57. In its compliance filing, PJM revises section 5.4(c) to explain more precisely when PJM will update the Reliability Requirement for a delivery year. For instance, PJM attempts to clarify the difference between "recalculating" and "updating" its Reliability Requirement (the amount of capacity it must have on hand at the beginning of the Delivery Year to meet reliability standards). PJM develops the Reliability Requirement prior to the Base Residual Auction for each year, and then, prior to each incremental auction, recalculates it. If, prior to the first and second incremental auctions, the recalculated Reliability Requirement diverges from the prior Reliability Requirement by 500 MW or one percent, whichever is less, PJM will "update" the Reliability Requirement, i.e., replace the prior Reliability Requirement amount with the recalculated amount. Prior to the third incremental auction, which takes place a few months before the beginning of the Delivery Year, PJM will update the Reliability Requirement if it diverges at all from the prior Reliability Requirement.

58. After its Reliability Requirement is updated prior to any of the incremental auctions, PJM will either buy or "sell" (release) capacity as follows:

²⁵ August 14 Rehearing Order, 128 FERC ¶ 61,157 at P 56.

²⁶ *Id.* at P 57.

²⁷ *Id.*

- If the updated Reliability Requirement is greater than the prior Reliability Requirement, PJM will purchase additional capacity to meet that shortfall. *See* PJM tariff, Attachment DD, section 5.4(c)(1).
- If the updated Reliability Requirement (minus the hold-back portion for short lead time resources) is greater than the total amount of capacity already committed, PJM will also purchase additional capacity to meet that shortfall. *See* PJM tariff, Attachment DD, section 5.4(c)(2).
- If the updated Reliability Requirement is less than the prior Reliability Requirement, PJM will seek to sell back capacity, as described above, to lower that excess. *See* PJM tariff, Attachment DD, section 5.4(c)(3).

59. PJM asserts that its proposed clarifications to the incremental auction provisions are just and reasonable. It states that during the stakeholder process, the only objection to these provisions was raised by the Illinois Commission, which made similar arguments to those in its rehearing request. PJM states that:

The Illinois Commission's primary concern in its April 23, 2009 rehearing request seems to be what it terms "reciprocal treatment," i.e., if PJM includes the uncleared portion of the VRR curve in the Incremental Auctions in certain circumstances when committed capacity falls short of the Reliability Requirement, then PJM should offer to sell back capacity when the committed capacity exceeds the Reliability Requirement.²⁸

60. In PJM's view, however,

The Illinois Commission's position effectively rejects a fundamental purpose of RPM's sloped demand curve. The VRR Curve can result in commitment of capacity in excess of the target Reliability Requirement when that is the least-cost overall solution. The Commission has expressly approved the VRR Curve for PJM and similar demand curves for other

²⁸ September 1 Transmittal at 24-25, *citing* Illinois Commission's April 23, 2009 request for rehearing at 12-14 and Illinois Commission's presentation to the CMEC at its July 17, 2009 meeting, "Incremental Auction Proposal; Reciprocal Treatment," posted at: <http://pjm.com/committees-and-groups/committees/~-/media/committees-groups/committees/cmec/20090717/20090717-item-04c-incremental-auction-proposal-reciprocal-treatment.ashx>.

capacity markets based on evidence that they should result in greater reliability at lower cost over time.²⁹ If, however, all capacity procured in excess of the Reliability Requirement in the base auction was sold back in the incremental auction, an essential attribute of the VRR Curve would be eliminated. Capacity above the target Reliability Requirement would be devalued; the former approach of using a vertical demand curve would effectively be reinstated; and reliability and cost would both likely be adversely affected.³⁰

61. PJM states that in this filing, it has clarified these provisions and taken steps to mitigate the "reciprocal treatment" concern raised by the Illinois Commission, without violating the fundamental design parameters of RPM. It states that it has revised section 5.12(b)(i) so that the use of the uncleared portion of the VRR curve in these circumstances is made clearer. PJM states:

Rather than stating that PJM will submit a Buy Bid based on the increment of the VRR Curve that has not cleared in any prior auction, PJM has revised this provision to explain that, when the test for a shortfall below the Reliability Requirement is triggered, PJM will employ in the clearing of the auction "an increment of the updated Variable Resource Requirement Curve that takes into account all capacity that has cleared as a result of all prior auctions conducted for such Delivery Year."³¹

3. Protest and October 14 Answer

62. The Illinois Commission is the sole protester on this issue. It states that, while it does not object to the majority of PJM's proposed incremental auction design changes, in its view those changes do not address the Illinois Commission's main concern – namely,

²⁹ [Footnote 36 in original.] *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331, at PP 75-78 (2006), *order on reh'g*, 119 FERC ¶ 61,318, *reh'g denied*, 121 FERC ¶ 61,173 (2007), *aff'd sub nom. Pub. Serv. Elec. & Gas Co. v. FERC*, D.C. Circuit Case No. 07-1336 (Mar. 17, 2009) (unpublished); *N.Y. Indep. Sys. Operator, Inc.*, 105 FERC ¶ 61,108, at P 39 (2003), *aff'd sub nom. Elec. Consumers Res. Council v. FERC*, 407 F.3d 1232 (D.C. Cir. 2005).

³⁰ September 1 Transmittal at 25.

³¹ *Id.*, citing proposed revision, PJM tariff, Attachment DD, section 5.12(b)(i).

the incremental auction design's inherent bias towards over-procurement. The Illinois Commission argues that, where reliability has been assured through capacity obligations equal to the Reliability Requirement, cost considerations should be given great weight.

63. The Illinois Commission asks the Commission to require the following modifications to PJM's incremental auction tariff language:

- 1) Remove the trigger based on a positive difference between the updated Reliability Requirement and the previous Reliability Requirement, i.e., delete Sections 5.4(c)(1) and 5.12(b)(ii).
- 2) Remove the trigger based on a negative difference between the updated Reliability Requirement and the previous Reliability Requirement, i.e., delete Sections 5.4(c)(3) and 5.12(b)(iii).
- 3) Add a trigger that would lead PJM to submit a sell offer when the actual megawatts of capacity procured in all previous auctions exceeds the updated Reliability Requirement. This new trigger would be the reciprocal treatment of the trigger in existing Sections 5.4(c)(2)/5.12(b)(i).
- 4) Revise Sections 5.12(b)(i) and 5.12(b)(ii) so that PJM's buy bid price in the incremental auction is the same price as represented by PJM's capacity resource deficiency charge.

64. The Illinois Commission argues that RPM has consistently procured capacity in excess of the Reliability Requirement. The Illinois Commission submits that sections 5.4(c)(1) (under which PJM purchases additional capacity when the updated Reliability Requirement is greater than the prior Reliability Requirement) and 5.4(c)(3) (under which PJM seeks to sell back capacity when the updated Reliability Requirement is less than the prior Reliability Requirement) result in over-procurement. The Illinois Commission further asserts that section 5.4(c)(2) (under which PJM purchases additional capacity when the amount of prior capacity purchased is less than the updated Reliability Requirement) fails to include a reciprocal provision that is needed to help avoid over-procurement. The Illinois Commission states that the incremental auction design should be modified so that (a) all triggers to PJM's purchasing and selling of capacity are tied to actual megawatts procured in previous auctions, and (b) PJM's buying and selling back of capacity should be treated reciprocally.

65. The Illinois Commission argues that over- and under-procurement can better be measured by comparing the updated Reliability Requirement to the total megawatts of capacity already procured. The Illinois Commission states that PJM does provide a mechanism tied to actual under-procurement (i.e., section 5.4(c)(2), which is triggered by the actual number of megawatts of capacity procured being less than the updated Reliability Requirement), but does not provide a reciprocal mechanism for actual over-

procurement. The Illinois Commission claims that this will cause PJM to procure excessive amounts of capacity, and reach inefficient results.

66. The Illinois Commission disagrees with PJM's argument that adoption of the Illinois Commission's incremental auction recommendations would effectively reject a fundamental purpose of the sloped demand curve. It states:

It is true that the Illinois Commission recommends using the difference between the updated Reliability Requirement and the actual capacity procured in all prior auctions to determine PJM's participation in incremental auctions. However, the Illinois Commission's recommendations would retain the sloped principles of the variable resource requirement curve (VRR curve) in both the over-procurement and under-procurement triggers.³²

67. The Illinois Commission further argues that, when the conditions are triggered for PJM to buy in the incremental auctions, PJM proposes to submit a buy bid at a price equal to 1.5 times Net CONE, but does not provide any substantive rationale to support a buy bid that high. The Illinois Commission contends that this price is too high, and it proposes that PJM's offer price should be no higher than the weighted average auction clearing price for previously held auctions for a specific delivery year, plus the greater of (a) .2 times such average price or (b) \$20/MW day. It states that this proposed buy bid cap is based on the capacity resource deficiency charge (i.e., the penalty charged to any capacity supplier for non-performance) specified in section 8 of Attachment DD of the PJM tariff. The Illinois Commission argues that this deficiency charge, which is charged to any accepted capacity supplier that does not deliver capacity, effectively places a ceiling on the buy bids that capacity resources will submit in incremental auctions, and that, since apparently PJM has decided that this *de facto* ceiling on buy bids submitted by capacity resources will not threaten reliability, PJM should analogously not be permitted to submit buy bids in excess of this amount.

68. In its October 14 answer, PJM reiterates its view that the Illinois Commission's position, in essence, constitutes a rejection of the VRR curve previously found to be just and reasonable.³³ PJM states that, when the VRR curve operates in the Base Residual

³² Illinois Commission protest at 12.

³³ See PJM October 14 answer at 5, citing cases where the Commission has previously found a downward-sloping demand curve to be just and reasonable, *id.* at 5 n.14.

Auction in such a way as to clear more capacity than the Installed Reserve Margin (IRM),³⁴ this is not an error: rather, this is the VRR curve working as designed.

69. PJM further argues that, contrary to the Illinois Commission's position, there is and need not be any relationship between the penalty charged by PJM to capacity suppliers who fail to perform when called, and the price at which PJM purchases new capacity. It states:

A seller that has previously committed capacity in RPM may seek replacement capacity through the Incremental Auctions if it is concerned its resource may not fully perform. That resource owner generally would have no incentive to pay more for replacement capacity than the penalty rate, since its alternative to buying the replacement is to pay the penalty. . . . By contrast, if the Reliability Requirement increases from one auction to the next (for example, due to a load forecast increase), then PJM must seek capacity from previously uncommitted resources. Such resources were too expensive to clear in the prior auctions, or may have alternatives in other markets. The penalty rate has no bearing on the price they will accept to commit to PJM, so there is no reason to base PJM's offer on the penalty rate.³⁵

4. Commission Ruling

70. We will accept, subject to conditions, PJM's filing to comply with our requirement in the August 14 Rehearing Order to submit revised tariff sheets that provide a better explanation of the precise conditions that would trigger procurement or sale of capacity in the incremental auctions.

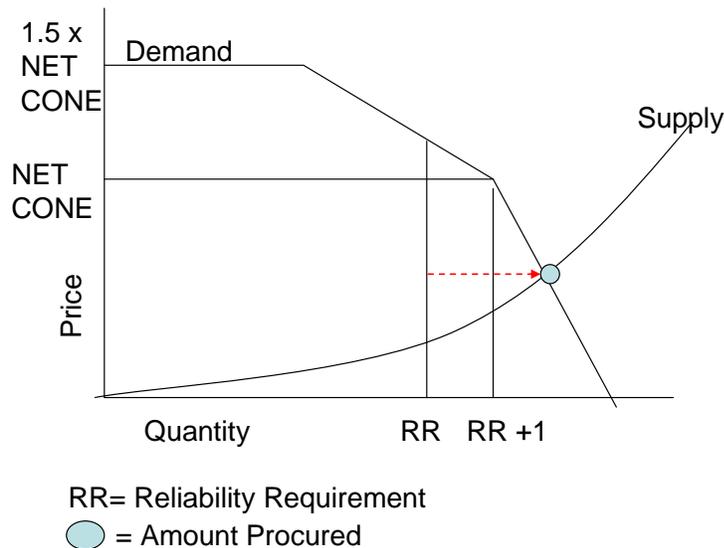
71. Put simply, PJM proposes to seek to buy additional capacity in any incremental auction if the amount of capacity procured to date is below the updated Reliability Requirement by a threshold amount (500 MW or 1 percent). In addition, it proposes that whenever the Reliability Requirement is changed beyond a threshold amount (either increasing or decreasing), PJM will seek to buy or sell the amount of the change in the Reliability Requirement (adjusted for the holdback). As a general matter, this proposal

³⁴ IRM is the amount "required by the PJM Region to satisfy a one day in 10 year Loss of Load Expectation . . . expressed as a percentage of the forecasted annual peak load." PJM tariff, Original Sheet 280D.02.

³⁵ *Id.* at 14.

accords with the use of the VRR curve as accepted by the Commission. The purpose of using the VRR curve is to reduce capacity volatility, thereby reducing the risk and the financing cost of investment, to the benefit of customers.³⁶ Implicit in this curve is the expectation that PJM will sometimes procure in excess of its Reliability Requirement if additional capacity can be procured at sufficiently low prices. The VRR curve also allows PJM to procure less capacity than its Reliability Requirement when the price needed to procure capacity is sufficiently high. Under the VRR curve, it is to be expected that PJM will procure more capacity than the Reliability Requirement in some years (when supplies are plentiful and offered at comparatively low prices) and will occasionally procure less capacity than the Reliability Requirement in other years (when supplies are less plentiful and offered at higher prices). As shown in the graph below, with the supply and demand curves in the example, PJM would procure capacity at the point at which the supply curve intersects the demand curve, which is greater than the Reliability Requirement.

Figure 1



³⁶ *PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,079, at P 104 (2006):

A downward-sloping demand curve would reduce capacity price volatility and increase the stability of the capacity revenue stream over time. This is because, as capacity supplies vary over time, capacity prices would change gradually with a sloped demand curve. . . . The lower price volatility under the sloped demand curve would render capacity investments less risky, thereby encouraging greater investment and at a lower financing cost.

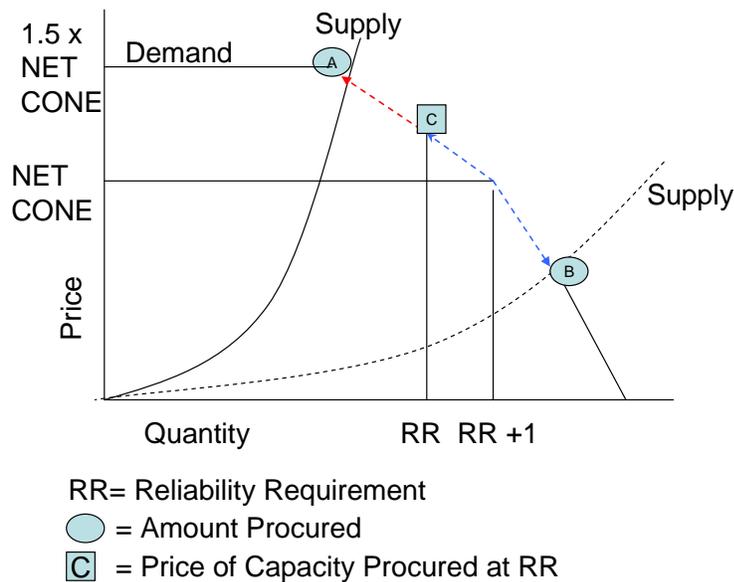
72. PJM's filing and the Illinois Commission's protest have raised two issues: whether and under what circumstances PJM should be required to sell back capacity; and whether PJM should be willing to pay up to 1.5 times Net CONE to purchase additional capacity when the Reliability Requirement increases by the threshold amount.

a. **Sell-Back Requirement When PJM Procures More Than The Reliability Requirement**

73. As noted, PJM may procure capacity less than the Reliability Requirement when capacity offer prices are relatively high. PJM has proposed to seek to acquire additional capacity in the incremental auctions whenever the amount of capacity previously procured is less than the updated Reliability Requirement. Although technically, the use of the VRR curve is designed to allow PJM to procure less capacity when capacity prices are high, when this occurs PJM is not meeting its Reliability Requirements. We therefore find reasonable PJM's effort to try to meet its Reliability Requirement through the incremental auctions when additional supplies become available at a sufficiently low price, in accordance with the VRR curve.

74. The VRR curve represents the maximum price that PJM is willing to pay for various amounts of capacity. In general, the maximum price will decrease as the amount of capacity purchased increases. Although, as discussed *infra* in paragraphs 80 and 81, PJM's tariff provision does not identify clearly how it will choose the appropriate price, we interpret this provision to mean that PJM will not be willing to pay more for the additional capacity than the capacity would be worth as represented on the VRR curve. As the following graph indicates, PJM would be willing to pay only the dotted line amounts between the amount procured (A) and the Reliability Requirement (C) for additional capacity.

Figure 2



75. In general, we find PJM's proposal to meet its Reliability Requirement through the incremental auctions when additional supplies become available at a sufficiently low price in accordance with the VRR curve. Although technically, the use of the VRR curve is designed to allow PJM to procure less capacity when capacity prices are high, when this occurs PJM is not meeting its Reliability Requirement. PJM's proposal will help it to assure reliability and we therefore find it just and reasonable.

76. The Illinois Commission contends that PJM's proposal is unduly discriminatory because it proposes only to buy capacity when it has procured less than the Reliability Requirement, but does not propose to sell capacity when it has procured capacity greater than the updated Reliability Requirement. The Illinois Commission argument is not clear as to when and at what price it believes PJM should be willing to sell capacity. To the extent that the Illinois Commission is proposing that PJM should be willing to sell capacity at any price above \$0, we find that this argument is inconsistent with the VRR curve, which was previously approved for RPM, and is beyond the scope of this filing. As discussed above, the VRR curve recognizes that when offer prices are relatively low, PJM will purchase capacity greater than the Reliability Requirement.

77. However, we do agree that PJM's proposal may unreasonably discriminate in certain situations. There may be situations in which a generator is willing to buy its capacity obligation back from PJM for an amount greater than what the excess capacity is worth to PJM, as reflected in the VRR curve. For example, a new generator may be unable to complete its plant on time, which would subject it to a penalty (the higher of 20 percent of the capacity price or \$20/MW-day above the capacity price). If that generator is unable to purchase replacement capacity from another generator or resource, it might be willing to buy its obligation back from PJM at a price lower than the capacity price

plus penalty, but greater than the price PJM paid for that capacity in a previous auction. As indicated on the above graph, PJM should be willing to sell back to a generator at prices that exceed the Base Residual auction price (as represented by the dotted line from the amount procured (B) to the Reliability Requirement (C)). By buying the capacity back, the generator would be better off because its buy-back of capacity would cost less than the penalty, and PJM (and load) would be better off because they would save more on capacity costs than the capacity is worth.

78. We recognize that this requirement would need to be implemented in conjunction with the requirement to purchase additional capacity when the Reliability Requirement increases above the threshold, and in some cases both the purchase and sale requirements would apply at the same time. In this situation, whether PJM ultimately buys or sells capacity in the incremental auction should depend on whether the market price is comparatively high or low. If the price is sufficiently high, PJM would sell capacity and would not buy any additional capacity. Conversely, if the price is sufficiently low, PJM would buy additional capacity and would not sell any capacity that it had acquired in previous auctions.

79. PJM has not provided a satisfactory justification for not including a sell-back provision in these circumstances. We will therefore accept PJM's filing conditioned on PJM either revising its tariff to provide for a provision governing its sell-back of capacity that is symmetrical with the purchasing provisions under section 5.12(b)(i), or providing an explanation as to why such a provision should not be included.

80. Additionally, as noted above, we find unclear proposed section 5.12(b)(i), which states,:

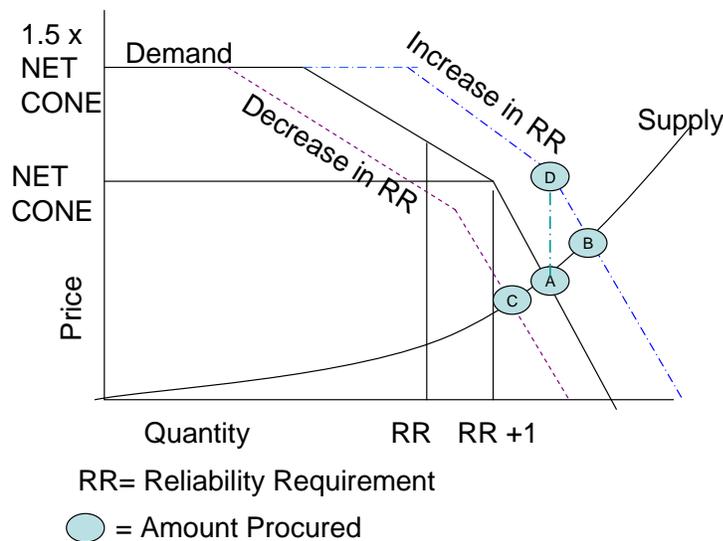
When the requirement to seek additional resource commitments in a Scheduled Incremental Auction is triggered by section 5.4c(2) of this Attachment, the Office of the Interconnection shall: (A) employ in the clearing of such auction an increment of the updated Variable Resource Requirement Curve that takes into account all capacity that has cleared as a result of all prior auctions conducted for such Delivery Year; and (B) submit a Buy Bid in an amount equal to the Short-Term Resource Procurement Target Applicable Share for such auction at a bid price equal to 1.5 times Net Cone.

81. This tariff language does not clearly describe the specific prices at which PJM would offer to pay to purchase varying amounts of capacity. We will therefore accept the filing on the condition that PJM file with us a revised section 5.12(b)(i) that clearly describes the specific prices at which PJM would offer to pay to purchase varying amounts of capacity.

b. Price At Which PJM Should Purchase Capacity When the Reliability Requirement Increases

82. We also find reasonable, and consistent with the objectives of the VRR curve, PJM’s proposal to make adjustments in the incremental auctions to reflect changes in the estimates of peak load that have occurred since the previous auctions. If the peak load forecast (and thus, the Reliability Requirement) increases from that underlying the Base Residual Auction, it is reasonable for PJM to seek to procure additional capacity in the incremental auction to reflect the higher Reliability Requirement. Even if the amount procured in the Base Residual Auction exceeds the Reliability Requirement, PJM would have procured even more capacity than it did, if the higher Reliability Requirement had been reflected in the VRR curve. Therefore, PJM should seek to procure additional capacity when its load forecast is substantially incorrect (in accordance with the 500 MW or 1 percent trigger). Similarly, if the peak load forecast significantly decreases, PJM would have procured less capacity than it did in the Base Residual auction, but it still may have procured more capacity than represented by the Reliability Requirement. The following graph illustrates the effect of an increase or decrease in the Reliability Requirement on the amount of capacity that PJM should procure under the same supply conditions.

Figure 3



83. However, we agree with the Illinois Commission’s concerns that the price PJM proposes to pay for the additional capacity may be too high and lead to over-procurement of capacity when the amount of capacity already procured in prior auctions exceeds the updated Reliability Requirement. PJM proposes to pay up to 1.5 times Net CONE in order to obtain additional capacity. However, as can be seen on the graph above, if PJM had originally purchased the capacity needed to serve the now-increased peak load in the Base Residual Auction, that additional capacity would not be worth a price of 1.5 times

Net CONE. For example, Point B in the graph represents the price of capacity that would have resulted if the increased Reliability Requirement had been modeled at the time of the Base Residual auction. Point D on the graph represents the price based on the updated Reliability Requirement for the amount of capacity already procured. Given these prices, PJM has not provided a sufficient justification for its proposal which would allow it to pay substantially more, up to the full 1.5 times Net CONE for additional capacity when the amount of capacity already procured exceeds the updated Reliability Requirement. Indeed, as discussed above in relation to Figure 2, PJM seems to recognize that when the amount procured in the Base Residual Auction is less than the Reliability Requirement, it should not pay up to 1.5 times Net CONE to acquire the additional capacity needed to get closer to the Reliability Requirement. It has not explained why this principle does not apply when the Reliability Requirement increases.

84. We therefore will accept PJM's filing on the condition that PJM revise the price at which it is willing to purchase additional capacity in incremental auctions when the updated Reliability Requirement exceeds the thresholds, or justify its proposal to pay 1.5 times Net CONE.

D. Additional Issues

85. PJM further states that it is correcting the omission or language on Substitute Second Revised Sheet No. 621, as required by the Commission,³⁷ and is also continuing its consideration of longer-term issues. As part of those long-term issues, PJM is planning a long-term issues symposium for January or February 2010, to guide the efforts of the Capacity Market Evolution Committee going forward.³⁸ PJM has also commissioned a study by the Brattle Group to compare and contrast RPM with alternative power market designs and evaluate each design's ability to maintain resource adequacy.

³⁷ August 14 Rehearing Order, 128 FERC ¶ 61,157 at P 65.

³⁸ That symposium is now scheduled for January 26 and 27, 2010 (<http://pjm.com/committees-and-groups/committees/~media/committees-groups/committees/cmec/20091016/20091016-item-08a-long-term-issues-symposium.ashx>) and the Brattle Report has now been published (<http://pjm.com/committees-and-groups/committees/~media/committees-groups/committees/cmec/20091016/20091016-item-08c-brattle-rpm-comparison-whitepaper.ashx>).

E. RPM Technical Conference

86. The Commission previously announced that it intended to hold a technical conference on certain aspects of RPM, and we subsequently announced the deferral of that technical conference pending further notice.³⁹ We now note that we no longer consider a technical conference on RPM to be immediately useful, and we are therefore cancelling our earlier proposed technical conference.

The Commission orders:

(A) We hereby accept PJM's proposal for an automated adjustment to the CONE parameter, subject to conditions, as discussed above, to become effective November 1, 2009.

(B) We accept PJM's compliance filing with regard to the hold-back for short lead time resources, the provisions regarding incremental auctions, and changes to language on Substitute Second Revised Sheet No. 621, as discussed above, subject to conditions, effective November 1, 2009.

(C) Within 60 days of the date of this order, PJM must make a filing consistent with the conditions established in this order.

(D) We hereby cancel our earlier-announced technical conference on RPM.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

³⁹ *PJM Interconnection, L.L.C.*, 124 FERC ¶ 61,272, at P 53 (2008); Notice Deferring Technical Conference, PJM Interconnection, L.L.C., Docket No. ER05-1410-012 *et al.* (February 18, 2009).