123 FERC ¶ 61,015
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Suedeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

PJM Interconnection, L.L.C. Docket Nos. ER08-516-000,
ER08-516-001 and ER08-516-002

ORDER ADDRESSING PROPOSED TARIFF REVISIONS

(Issued April 4, 2008)

1. On January 31, 2008, as amended on February 6 and 12, 2008, PJM Interconnection, L.L.C. (PJM) submitted for filing, pursuant to section 205 of the Federal Power Act (FPA),[1] proposed revisions to its Reliability Pricing Model (RPM), the competitive auction mechanism administered by PJM to secure its forward commitment of capacity resources.[2] PJM proposes to revise Attachment DD of its OATT, at section 5.10(a)(iv), to reflect its claimed rise in its Cost of New Entry (CONE) values, one of two components relied upon by PJM to determine its Variable Resource Requirement (VRR) curve for its RPM auction.[3] PJM also proposes to add a new section 17.7 to Attachment DD, permitting PJM to unilaterally request its CONE increase for use in its May 2008 RPM auction for the 2011/12 delivery year, i.e., to make the instant filing, notwithstanding the specified stakeholder review process contemplated by Attachment DD at section 5.10(a)(vi)(C). This order rejects PJM's filing because PJM did not adhere to the tariff schedule set forth in its tariff and failed to establish that its proposal to revise that provision is necessary on a one-time emergency basis to ensure reliable service.

---

[1] 16 U.S.C. § 824d (2000).

[2] *See* PJM Open Access Transmission Tariff (Tariff) at Attachment DD.

[3] As discussed below, in addition to CONE, the VRR Curve is based on a net energy and ancillary services revenue offset (E&AS Offset), producing the net CONE. *Id.* at section 2.42.

Background

2. In 2006, the Commission accepted, subject to conditions,[4] the RPM Settlement, which established a new forward looking capacity market. In the RPM base residual auction, both existing and planned new capacity resources offer their capacity for delivery three years in advance. Base residual auction clearing prices are determined by the intersection of total supply offers and a downward-sloping VRR curve, i.e., a demand curve. The demand curve for each zone is based upon a parameter that reflects the estimated economics of a new gas-fired, combustion turbine peaking unit in the zone. The RPM capacity price considered necessary to attract new entry, net CONE, is calculated as the levelized, estimated fixed cost of a new peaking unit (the estimated cost of new entry, or CONE) net of a historical average of the estimated energy and ancillary services net earnings for such units (E&AS Offset). The estimate of net CONE affects the height of the demand curve. Specifically, the price on the VRR curve is equal to net CONE at the point where the level of capacity is IRM[5] + 1 percent. Raising the value of net CONE, thus, raises the price at the point on the curve where the level of capacity is IRM + 1 percent, and thus, shifts the entire VRR curve upward, resulting in higher capacity prices at every capacity level until the curve crosses the horizontal axis.

3. PJM states that the PJM Tariff, at Attachment DD, section 5.10(a)(iv), specifies CONE in dollars-MW/year for three regions within PJM: one anchored by New Jersey; one anchored by Maryland; and one anchored by Illinois. PJM developed those estimates of the CONE in the course of developing the RPM procedure during 2004 and 2005, and they were intended to approximate the levelized annual fixed cost of a new gas combustion turbine facility in 2006. PJM proposes to increase its authorized CONE values in each of these regions, respectively, from $72,207 to $106,904 MW/year, from $74,117 to $105,414 MW/year, and from $73,866 to $104,260 MW/year. These increases represent an approximately 40-50 percent rise over the currently-effective CONE values, depending on the geographic area at issue.

4. PJM states that the revision is necessary to reflect inflation in construction costs that has occurred since its original analysis and additional inflation in construction costs likely to occur before 2010, the year in which a new supplier would have to begin construction in order to provide capacity in the 2011-2012 delivery year. PJM states that

---

[4] *See PJM Interconnection, L.L.C.,* 119 FERC ¶ 61,318 (2007) (June 25 Order), *see also PJM Interconnection, L.L.C.,* 117 FERC ¶ 61,331 (2006) (December 22 Order) and *PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,079 (2006) (April 20 Order).

[5] Installed Reserve Margin (IRM) is the amount of capacity expected to be needed to meet the traditional 1-day-in-10-year reliability target, where firm load is involuntarily curtailed no more than 1 day in 10 years due to inadequate capacity.

its proposed CONE increase in the instant filing was calculated using a substantially identical approach to its originally-established CONE. PJM states that the January 30, 2008 CONE study prepared by Pasteris Energy, Inc. (Pasteris Report)[6] was prepared by the same consultant used to support its initial CONE.

5. PJM states that under Attachment DD, section 5.10(a)(vi)(C), PJM is required to conduct, at a minimum, a triennial review of its CONE values in order to ensure that its CONE values are kept current with prevailing market conditions. In addition, PJM states that under section 5.10(a)(iv)(B), an automatic adjustment is allowed based on increases in net demand observed over the course of three consecutive delivery years.[7] PJM asserts, however, that an empirical CONE adjustment in this case would be too small because PJM's tariff caps empirical CONE adjustment at 10 percent. Accordingly, PJM asserts that it is obligated to take action in this case under section 5.10(a)(vi)(C), even in the absence of a stakeholder consensus,[8] given the significant increases in new plant construction costs it claims are at issue as well as the reliability concerns presented.

6. Specifically, PJM argues that power plant construction costs have increased substantially in the last two years. PJM notes that, according to the Handy-Whitman Index (an industry resource that tracks electric plant cost escalations), the costs of combustion turbine power plants have increased by 20 percent in the last two years. PJM states that the Pasteris Study projects increases of 27 percent for a plant starting construction on January 1, 2008 in each of the three relevant sub-regions of PJM.

7. PJM states that due to the forward nature of RPM, these 2008 estimates must be projected forward to reflect new plants built to enter service for the 2011/12 delivery year (i.e., the deliver year that will be subject of PJM's May 2008 auction). PJM states that assuming that such a plant would need to start construction no later than January 1, 2010, the capital costs reflected in the Pasteris Report were projected forward an additional two years. PJM states that for this purpose, it has applied to certain of the cost components a 10 percent two-year historic average of the Handy-Whitman inflation index. PJM asserts that this average is the most relevant to the time frame within which a potential developer

---

[6] PJM filing at Attachment C.

[7] The section 5.10(a)(vi)(B) adjustment, also known as the "empirical CONE mechanism," provides for a gradual ratcheting up (or down) and does not require Commission approval.

[8] PJM states that it was unable to obtain stakeholder support for this filing because vote was essentially split between supply and load (46% voting "Yes" versus 54% voting "No" in sector weighted vote).

would calculate its costs at the time it determines whether or not to proceed with an investment decision.[9]

8. PJM acknowledges that to increase its CONE values, as applicable to the May 2008 auction, it was required under the terms of the RPM Settlement approved by the Commission, and set in Attachment DD, at section 5.10(a)(vi)(C), to provide notice to its stakeholders by September 1, 2007 (thus providing for a four month review process). PJM also acknowledges that the required notice was not provided here. PJM adds that when PJM's members committee did vote on PJM's proposed CONE increase, on January 24, 2008, the measure failed.[10] No alternative proposal was offered by PJM.

9. PJM asserts, however, that the section 5.10(a)(vi)(C) timeline applicable to its proposed CONE increase has proven unworkable for the RPM transition period and that its CONE increase is necessary for reliability purposes. Accordingly, PJM proposes a new section 17.7 for Attachment DD, authorizing PJM to make the instant filing on a unilateral basis. The proposed language reads as follows:

> Notwithstanding Section 5.10(a)(vi)(C)(1), if the Office of Interconnection determines that the Cost of New Entry values should be modified prior to a Base Residual Auction in calendar year 2008 in which the new values would be applied, staff of the Office of Interconnection shall propose new Cost of New Entry values on or before December 31, 2007, and file changes with the Commission on or before January 31, 2008.

10. PJM adds that going forward, the September 1 deadline will continue to apply to any subsequent CONE changes. PJM requests that its proposed tariff revisions be made effective March 31, 2008 in anticipation of its May 2008 RPM Base Residual Auction.[11]

---

[9] PJM notes that a two-year look ahead is consistent with the timeframe in which construction would need to begin such that commercial operation of a new generator could be achieved in time for the 2011/12 delivery year.

[10] PJM notes that a significant majority of PJM's transmission and generation owners supported the increase, while an equally significant majority of PJM end-use customers and distributors opposed the increase.

[11] On February 6, 2007, PJM supplemented its filing with an affidavit inadvertently omitted from its initial filing. In a second supplemental filing, on February 12, 2008, PJM made typographical corrections.

Notices of Filing and Responsive Pleadings

11. Notices of PJM's filings were published in the *Federal Register*[12] with interventions and protests due on or before March 6, 2008. Motions to intervene, comments and protests were timely filed by the entities noted in the Appendix to this order. On March 7, March 11 and 14, 2008, motions to intervene out-of-time were filed by Portland Cement Association, Tyr Chesapeake, LLC (Tyr Chesapeake) and Dominion Resources Services, Inc. (Dominion).[13] On March 18, 2008, the PJM Power Providers Group filed an answer to protests. On March 19, 2008, PPL filed an answer to protests. On March 21, 2008, PJM and Sempra filed two separate answers to protests.

12. As noted above, stakeholder support for PJM's proposed CONE increase divides almost evenly as between supply and load interests. This division is also reflected in the parties' comments and protests. Specifically, comments generally supportive of a CONE increase were submitted by numerous entities representing transmission and generation interests, including Competitive Power Ventures, Inc., Constellation Energy, Duke Energy, EPSA, Mirant, NRG, PEPCO, PPL, the PJM Power Providers Group, PSEG, Reliant, and Sempra. Certain of these parties assert that the Pasteris Report understates actual CONE by at least 10.6 percent and perhaps as much as 28.1 percent because, among other things, it understates required capital margins, construction labor and materials costs, and contingency costs.[14] These intervenors conclude that PJM's proposed CONE increase falls on the low end of the range of potentially reasonable proxy unit costs.

13. These intervenors also support PJM's right to make its filing on a unilateral basis. In addition to the authority relied upon by PJM (i.e., new section 17.7 of Attachment DD), Duke Energy asserts that PJM is not required to rely on this provision or on the two Attachment DD options for revising the CONE. Instead, Duke Energy asserts that this authority exists under the settlement agreement giving rise to PJM's RPM protocols (RPM Settlement).[15] Duke Energy asserts that under the RPM Settlement, "[n]othing contained in the Settlement Agreement shall be construed as affecting in any way PJM's

---

[12] 73 Fed. Reg. 10,240, 10,764 and 10,754 (2008).

[13] Unless otherwise noted, all abbreviations used to identify Intervenors in this order are identified in the Appendix.

[14] *See* PJM Power Providers Group comments at attachment A, p. 2 (Affidavit of Jonathan S. Falk).

[15] *See PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331 (2006) (*RPM Settlement Order*), *order on reh'g and clarification*, 119 FERC ¶ 61,318, *order on reh'g*, 121 FERC ¶ 61,173 (2007).

right unilaterally to make application to the [Commission] for a change in rates, terms and conditions under section 205 of the [FPA] and pursuant to the Commission's Rules and Regulations promulgated thereunder."[16]

14. Intervenors representing distribution and end-use stakeholders, as well as state regulators (the Virginia State Corporation Commission) and consumer advocacy groups, argue that PJM's filing should be rejected on both procedural and substantive grounds. Procedurally, the RPM Buyers assert that PJM, in making its filing, failed to follow its required tariff protocols regarding the timing of its proposal and the need to obtain stakeholder approval. Rockland asserts that this stakeholder input was essential in order to fully vet PJM's analysis and consider reasonable alternatives. Rockland notes, in this regard, that when PJM first disclosed the magnitude of its proposed CONE increase, in early December, 2007, the proposal surfaced in the form of a single page summary, with the full 2008 CONE study (i.e., the Pasteris Report) not made available until early January, 2008.

15. The North Carolina COOP and ODEC argue that PJM's RPM protocols were negotiated and agreed to in the RPM Settlement and that in the negotiations leading to this agreement one of the most controversial issues was the process applicable to the development and revision of CONE values. The North Carolina COOP argues that here, PJM failed to follow the carefully-balanced process for changing CONE, as prescribed in the RPM Settlement.

16. APPA asserts that by missing its September 1, 2007 notice deadline, as applicable to a proposed CONE increase for the May 2008 auction, PJM's filing, in effect, seeks to retroactively eliminate this tariff requirement. North Carolina COOP agrees, noting that PJM's proposed CONE increase cannot be implemented in time for the May 2008 auction because the filed rate, i.e., the currently effective tariff commitment, requires a process that has not been followed. ODEC adds that to comply with the filed rate doctrine, PJM's proposal had to have been filed prior to September 1, 2007. Intervenors conclude that PJM's untimely filing violates the filed rate doctrine and should be rejected.

17. Intervenors also note that PJM has posted new CONE values as parameters for the May 2008 auction, even though these proposed CONE increases have not been accepted by the Commission.[17] These intervenors argue that, accordingly, PJM should be directed to correct the information it has posted to reflect PJM's currently-effective CONE values.

---

[16] *See* RPM Settlement at section III.

[17] *See* http://www.pjm.com/markets/rpm/downloads/20080201-2011-2012-rpm-planning-parameters.xls.

18. Intervenors also object to PJM’s filings on the merits. The RPM Buyers argue that PJM’s proposed increase in CONE leaves understated the E&AS Offset which, in turn, results in an excessive net CONE value that will distort the VRR curve and unjustly inflate capacity costs. The RPM Buyers argue that when recent and anticipated increases in E&AS earnings are taken into account, the currently effective RPM parameters (both the gross CONE and the E&AS Offset) are providing sufficiently high price incentives for new entry in PJM. The RPM Buyers conclude that, as such, no change is required.

19. The RPM Buyers assert that, in recent years, E&AS revenues for combustion turbines have risen even faster than generation construction costs and have far outstripped the revenue offsets that PJM proposes to use for 2011-12 delivery year. The RPM Buyers add that in light of declining reserve margins in PJM and anticipated further improvements in revenue opportunities under the PJM market design, potential entrants should anticipate further increases in energy and ancillary services earnings.

20. The RPM Buyers also argue that PJM’s filing is inconsistent with the RPM construct, which is intended to rely on the energy market, not the capacity market, to provide incentives for construction of capacity resources. In addition, the RPM Buyers argue that the asserted undervaluation of the CONE, as relied upon by PJM, is offset by the equal undervaluation of the E&AS Offset. The RPM Buyers point out that the E&AS Offset is based on a historical three-year average that understates expected E&AS earnings. They argue that PJM plans to continue using the average net E&AS revenues for 2005-2007 in the May 2008 auction for 2011/2012, while simultaneously using a CONE value escalated to 2010. Thus, although 2007 net E&AS revenues for the RTO region were $18,453/MW-year, PJM plans to use offsetting revenues of $13,368/MW-year, reflecting a period four to six years before the delivery year in question.

21. The RPM Buyers also argue that PJM’s proposal represents a 54.5 percent increase in net CONE, a distortion that could lead to unjust and unreasonable prices and produce price volatility in PJM’s capacity prices. The RPM Buyers assert that sudden and dramatic adjustments to CONE in response to short-term volatility in construction costs were addressed by the parties in the proceeding that lead to the RPM Settlement and were generally rejected.

22. The RPM Buyers also challenge PJM’s asserted reliability need for its proposed CONE increase. The RPM Buyers argue that PJM’s reliability concerns are only vaguely stated and are otherwise unsupported by the record presented here. Specifically, the RPM Buyers argue that PJM’s filing fails to identify the reliability concerns it claims exist, including where or when they exist, or the extent to which an increase in CONE, all else being equal, would remedy this concern. The RPM Buyers’ consultant, Mr. Wilson, adds that it is questionable that an increase in CONE would address any such reliability threat.

23. The RPM Buyers, in an affidavit prepared by their consultant, also challenge certain of the assumptions and assertions of fact set forth in the Pasteris Report, including the escalation factor used to determine CONE prices in 2010 and the assumptions made regarding the continued use of older construction technologies,

24. Rockland asserts that it remains unclear whether PJM's estimate of the CONE is based on the least-cost generator installation or simply a typical installation. Rockland adds that the Pasteris Report, while stating that its estimate includes fixed capacity revenue, provides no further information on the amount of these revenues, how they were calculated, or how they were reflected in the CONE. In addition, Rockland asserts that while a survey of municipal governments was conducted to determine property taxes, PJM fails to reveal which governments were surveyed, what questions were asked, or what the results of its survey were.

Discussion

A. Procedural Matters

25. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure,[18] the timely, unopposed motions to intervene submitted by the entities listed in the Appendix to this order serve to make them parties to this proceeding. In addition, given their interests, the early stage of this proceeding, and the absence of undue prejudice or delay, we will grant the unopposed late-filed interventions submitted by Portland Cement Association, Tyr Chesapeake and Dominion. Rule 213(a) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a) (2007), prohibits an answer to a protest unless otherwise permitted by the decisional authority. We will reject the answers that were submitted.

B. Analysis

26. For the reasons discussed below, we reject PJM's filing. PJM's RPM protocols provide two options for revising CONE values. First, Attachment DD, at section 5.10(a)(iv)(B), allows for automatic adjustments based on increases in net demand over the course of three consecutive delivery years. The empirical adjustment mechanism provides for a gradual ratcheting up (or down) of CONE without Commission review or discretionary PJM involvement when there is a net demand for new resources over any three-year period. The automatic CONE adjustment is based on the difference between the established CONE and the "empirical" cost of new entry, defined as the sum of the average clearing price and average of the net E&AS revenue offset. This adjustment is based on the assumption that the clearing price would reflect market participants' own estimates of the net cost of new entry when new entry is, in fact, needed. The PJM tariff

---

[18] 18 C.F.R. § 385.214 (2007).

establishes a 10 percent cap on empirical CONE increases, and according to PJM, this would provide only a fraction of the increase that it claims is warranted. Therefore, PJM chose not to rely on this option for revising CONE.[19]

27. Alternatively, Attachment DD, at section 5.10(a)(vi)(C), allows PJM to propose an adjustment based on a review of the CONE that must be made at least every three years. PJM relies on this authority as the basis for its filing.[20] However, PJM also acknowledges that it is not authorized to make its filing under this provision because its proposed CONE increase was not submitted to its stakeholders on or before September 1, 2007 (the cut off date applicable to CONE increases for the May 2008 RPM auction), as the tariff requires. Instead, PJM proposes a new section 17.7 that would establish a different time period on a one-time basis.

28. PJM has not established that the new section 17.7 is just and reasonable. While none of the intervenors dispute that the cost of constructing a new gas turbine facility has increased significantly since PJM last calculated the CONE in 2005, they argue, and we agree, that the provisions set forth in PJM's RPM protocols, as they relate to CONE adjustments, represent an important, if not critical, element of the bargain struck by the parties to the RPM Settlement. A CONE adjustment is significant because, when applied to net CONE, it sets the VRR curve. The VRR curve, in turn, determines the capacity price paid by end-use customers – in this case representing a significant increase. Provisions included in PJM's RPM protocols address this concern by giving PJM's members four months to review any CONE adjustment proposed by PJM and to submit alternatives that PJM is required to consider. This also provides RPM buyers the ability to mitigate against potentially high prices and to physically hedge their positions by making prudent business decisions regarding impending RPM price increases. As such, PJM's tariff provisions are not merely procedural formalities that can be said to have no significant impact on market participants.

29. Moreover, PJM has not shown in its filing that there is a good cause for ignoring the existing tariff provisions and accepting PJM's proposal to increase CONE values. While PJM vaguely suggests that a "significant reliability concern" motivates its filing, it provides no support for the claim. PJM simply provides conclusory statements that because construction costs have increased, a change in CONE is warranted. In fact, if PJM were to implement the automatic CONE adjustment mechanism (which it argues is

[19] *See* PJM filing at 4.

[20] *Id.* ("PJM files [its proposed] revisions pursuant to the [OATT's] provisions for at least triennial review in [Attachment DD, section] 5.10(a)(vi)(C) (as well as its general authority under [s]ection 205 of the [FPA]) to effect the change rather than rely on the empirical CONE mechanism included in [s]ection 5.10(a)(vi)(B).").

too small), PJM would need to conduct the so-called net demand study. In its filing, however, PJM does not mention such study. RPM Buyers provided evidence that no change to CONE is warranted under the Tariff rules because the most recent auction cleared within the "equilibrium zone," i.e. the RTO has cleared the amount of capacity in excess of the reliability requirement. PJM's data confirms that PJM has more than met its reliability requirement. In a report posted in accordance with the Commission's prior order,[21] PJM states that in the last auction, it achieved a 16.5 percent reserve margin, which is 1 percent higher than its required reliability margin.[22]

30. If PJM believes that CONE needs to be reset for its 2009 auction, it needs to follow the provisions in its existing tariff providing sufficient time for stakeholder review of the analysis and advance planning. In making such a filing, PJM and the stakeholders need to consider whether PJM's proposed method of calculating CONE by using projected values, including inflation, creates a mismatch with the determination of energy and ancillary service revenues, which rely on a historic average of the past three years.

<u>The Commission orders</u>:

PJM's filing is hereby rejected, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

---

[21] June 25 Order at P 209.
http://www.pjm.com/markets/rpm/downloads/20080201-2010-2011-bra-report.pdf

[22] PJM suggests, in its filing, and Duke Energy expressly argues, that PJM's filing is authorized under FPA section 205, notwithstanding the requirements of Attachment DD, section 5.10(a)(vi)(C). Given that we do not find PJM's proposal here just and reasonable, we are not going to address this secondary argument.

Appendix

Intervenors
Docket Nos. ER08-516-000, *et al*.

Allegheny Energy Companies
Ameren Services Company
American Public Power Association (APPA)
American Municipal Power – Ohio, Inc.*
Blue Ridge Power Agency*
Borough of Chambersburg, Pennsylvania*
Commonwealth of Pennsylvania, Department of Environmental Protection*
Competitive Power Ventures, Inc.
Constellation Energy Commodities Group, Inc. and Constellation Power source Generation, Inc. (Constellation Energy)
Dayton Power and Light Company
Delaware Public Service Commission
District of Columbia PSC
Dominion Resources Services, Inc
Duke Energy Ohio Inc. (Duke Energy)
Electric Power Supply Association (EPSA)
Exelon Corporation
FirstEnergy Service Company
FPL Energy Generators
Illinois Commerce Commission
Illinois Industrial Energy Consumers*
Illinois Municipal Electric Agency*
Industrial Energy Users–Ohio and Industrial Energy Consumers of PA*
Maryland Public Service Commission*
Maryland Office of People's Counsel*
Mirant Parties (Mirant)
New Jersey Board of Public Utilities
New Jersey Large Energy Users Coalition*
North Carolina Electric Membership Corporation (North Carolina COOP)
NRG Companies (NRG)
Office of the Ohio Consumers' Counsel*
Office of People's Counsel of the District of Columbia*
Old Dominion Electric Cooperative (ODEC)
Pennsylvania Public Utility Commission*
Pennsylvania Office of Consumer Advocate*
PEPCO Holdings, Inc. (PEPCO)
Portland Cement Association*
PPL Parties (PPL)
PJM Industrial Customer Coalition*
PJM Power Providers Group
PSEG Companies (PSEG)
Public Power Association of New Jersey*
Public Utilities Commission of Ohio
Reliant Energy, Inc. (Reliant)
Rockland Electric Company (Rockland)
Sempra Generation (Sempra)
Southern Maryland Electric Cooperative, Inc.*
Tyr Chesapeake, LLC.
Virginia State Corporation Commission

____

* parties sponsoring the protest submitted by the "RPM Buyers"