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. ER05-1410-001
EL05-148-001
ER05-1410-000
EL05-148-000

ORDER DENYING REHEARING AND APPROVING SETTLEMENT SUBJECT TO CONDITIONS

(Issued December 22, 2006)

1. In this order, the Commission approves, with conditions, a settlement filed by PJM Interconnection, L.L.C. (PJM) and multiple PJM market participants concerning PJM's Reliability Pricing Model (RPM) to establish new market rules that will enable PJM to obtain sufficient energy to reliably meet the needs of consumers within PJM. As the energy needs of participants in competitive markets subject to our jurisdiction continue to grow, the Commission must ensure just and reasonable rates by requiring that the energy supply continues to meet these growing needs. Specifically, the Commission must approve market designs and rate policies that elicit sufficient investment in energy, transmission, and demand response. The Commission approves this settlement, with conditions, because it achieves those goals, and ensures just and reasonable rates.

2. PJM operates the largest competitive wholesale electricity market in the country, covering 14 states, from the Eastern Seaboard as far south as North Carolina and as far west as Chicago. This system has eliminated barriers between regional utilities, providing for a more efficient sharing of resources and enabling parties to more easily access the cheapest sources of electricity from within the PJM footprint. To protect customers against the possibility of losing service, PJM is responsible for ensuring that its

system has sufficient generating capacity to meet its reliability obligations. These obligations require PJM to address reliability concerns that may arise in localized areas within its regional control.[1]

3. After extensive discussions within the membership of PJM, on August 31, 2005, PJM filed a proposal (the August 31 filing) to revise its markets to deal with current and projected violations of its reliability requirements. In an order issued on April 20, 2006, the Commission found that as a result of a combination of factors, PJM's existing market rules are unjust and unreasonable, because they fail to set prices adequate to ensure sufficient resources.[2] PJM's current market rules establish a single market for supply, but this structure does not assure that the supply is available to all local areas. For example, PJM stated that it anticipates multiple reliability violations in parts of eastern PJM, including northern New Jersey, and expects violations soon in the Delmarva and the Baltimore-Washington areas. PJM also contends that reliability problems are likely to extend to other parts of PJM in the near future, despite existing adequate supplies in those areas, because much of PJM's generation fleet is very old (and thus, may soon be retired),[3] and because current market revenues are likely to be insufficient to sustain

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[1] *See District of Columbia Public Service Commission*, 114 FERC ¶ 61,017 (2006) (for discussion of areas within the PJM system that are defined by physical constraints).

[2] *PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,079 (2006) (April 20 Order) at P 1-6.

[3] "The PJM system has thousands of megawatts of generation units tied up in aging infrastructure. . . . 75 percent of steam generators are 30 years or older, with 20 percent 50 years or older." Statement of Audrey Zibelman, PJM Executive Vice President and Chief Operating Offer, at Technical Conference on Reliability Pricing Model in Docket Nos. ER05-1410-000 and EL05-148-000, February 2, 2006.

continued and future investment.[4] PJM demonstrated that in some areas, the addition of new generating units to the system will lag dramatically behind the anticipated growth in demand.

4. PJM's current rules also create significant price volatility for electric supply. Generating units can easily leave and re-enter the markets, for periods as short as a single day. Therefore, prices spike as soon as the supply of generation falls below the minimum needed to meet reliability criteria, and then fall to zero as soon as the supply rises above that required minimum. PJM asserts that generators are reluctant to invest in new plants, or retain existing plants, under conditions of such extreme volatility.

5. Based on this record, the Commission found PJM's existing market for supply to be unjust and unreasonable, and established further proceedings to determine a just and reasonable replacement for the existing market structure. The Commission also encouraged the parties to continue to seek a negotiated resolution. The parties commenced settlement discussions under the auspices of Administrative Law Judge Lawrence Brenner. More than 65 parties participated in the extensive settlement discussions for over 25 days, and reached a settlement that is widely supported. Compared to 33 protests of PJM's original filing, the Settlement is formally opposed by only 11 parties. The parties supporting or not opposing the Settlement included a broad segment of PJM stakeholders, including generators, load serving entities, municipalities, as well as five state commissions and two consumer groups. Many commenters have stressed the extent to which multiple parties were willing to compromise and to make significant concessions in order to reach a settlement acceptable to the majority.[5]

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[4] *See* Affidavit of Joseph Bowring, Tab G, August 31 filing (Bowring Affidavit), at 12, 15 (net generator revenue in PJM has been insufficient to cover the full costs of investment for "several years"). Mr. Bowring has provided the following figures regarding the annual average revenues of generating units from 1999 to 2004: The average cost of new entry (20-year nominal levelized annual cost) for a new combustion turbine unit is $72,000/MW, while the average annual net revenue from such a unit is $44,000 megawatts. The average cost of new entry for a combined cycle unit is $93,500/MW, while the annual net revenue from such a unit is $77,000 megawatts. The average cost of new entry of a coal unit is $208,000/MW; annual net revenue from such a unit is $142,000 megawatts.

[5] *See, e.g.*, PJM comments at 2 ("it is remarkable that the contesting parties reached any settlement, let alone one as broadly supported as the Settlement Agreement. The . . . greatest credit must go to the parties themselves, their commitment of time and resources to four months of intensive negotiations, and most importantly, their willingness to

(continued…)

6. We appreciate the parties' commitment to this settlement process, and as discussed in the order, find that the Settlement, with a few changes, will result in continued provision of reliable energy supplies within PJM at just and reasonable rates. Based on the evidence supplied by the parties, the Settlement is expected to provide greater incentives for new generation, transmission, and demand response, while also providing sufficient revenues to retain existing resources that are needed. The evidence submitted shows that the Settlement is forecasted to enable PJM to meet its reliability obligations 95 percent of the time, as compared with a forecast of only 52.2 percent under its existing market structure.[6] It also projects that the overall cost of the Settlement provisions will be less than what would be incurred under PJM's existing mechanisms. The major provisions of the Settlement are summarized as follows:

- In order to assure that sufficient supply is obtained for local areas, the Settlement provides that each company providing electricity to customers throughout PJM is required to supply or purchase resources to provide sufficient electricity to meet the reliability targets for its service areas. The Settlement therefore creates separate areas (Locational Delivery Areas) within PJM, and requires that generation and transmission to those areas be sufficient to provide reliable service.

- The Settlement provides that utilities can supply their energy needs through a combination of generation, transmission, and demand response, including energy efficiency.

- Prices will be set in each area to reflect the needs of each area. The Settlement provides for prices to be set through an auction market with a demand curve that reflects the reliability value of increased supply. The demand curve is expected to decrease the volatility of the market and thereby create a better market environment for investment in new generation and retention of existing plants as well as in demand response programs. Utilities that prefer not to participate in the

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compromise"); FPL Energy Generators comments at 2-3; American Forest and Paper Association comments at 2. (For a list of the parties who either joined the Settling Parties or agreed not to oppose the settlement, see Appendix B to this order. For a list of the parties who filed comments to the settlement, see Appendix C. For a partial list of the parties who filed requests for rehearing of the April 20 Order, see Appendix D.)

[6] *See* Supplemental Affidavit of Benjamin Hobbs, Attachment C to the Settlement Agreement and Explanatory Statement of the Settling Parties, filed September 29, 2006 (Hobbs Supplemental Affidavit) at 4.

auction market and that meet certain other requirements may procure a pre-determined amount of supply outside the auction sufficient to ensure reliability for their customers.

- To increase the opportunities for competition from new entry, the Settlement provides that companies providing service to customers must contract with suppliers three years in advance to ensure that reliability goals are met and that current generators as well as new generators can be assured of sufficient revenues to either retain their current investment in PJM, or invest in constructing new generating units.

- The Settlement includes a number of design features that discourage the exercise of market power and market manipulation generally. Specific mitigation rules and increased competition from new entry are the most important design elements in this regard. Additionally, since this market design is anticipated to decrease price spikes, it is likely to provide fewer incentives for sellers to exercise market power by withholding supply from the market.[7]

7. The Commission conditions its approval of the Settlement on the filing by PJM of changes to the provisions that discriminate between signatories and non-signatories, changes to the provisions giving inappropriate discretion to the PJM Market Monitor, and changes to enable a greater number of resources expeditiously to recover the costs of complying with state-mandated requirements. The Commission also requires PJM to conduct a forum for discussions to identify and rectify barriers to entry of demand response within 60 days of the date of this order, and to file a report on the status of the additional process for pursuing demand response and incorporating energy efficiency applications within 240 days of the date of this order.

I. Background

A. PJM's August 31 Filing

8. The background of this proceeding is set forth in greater detail in the April 20 Order. Briefly, however, PJM operates the largest competitive wholesale electricity market in the country, covering 14 states, that provides for efficient sharing of resources

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[7] *See New York Independent System Operator, Inc.*, 103 FERC ¶ 61,201 at P 67 (2003) ("The Commission agrees that the removal of the 'boom-bust' nature of the . . . market will significantly reduce the incentive to withhold when . . . supply and demand are relatively close").

and enables parties to access the cheapest sources of supply from within the PJM footprint. PJM is responsible for ensuring the reliability of the system it operates and currently oversees capacity obligations of its Load Serving Entities to ensure that it has sufficient generating capacity to satisfy its reliability responsibilities.[8] For some years, PJM states, it has had difficulty from time to time in meeting reliability requirements in localized areas, and it expects this problem to expand to other areas as well.[9] PJM has been working with its stakeholders for several years to develop a comprehensive approach to both retaining existing generation and establishing prices that will encourage the entry of resources to resolve reliability problems.

9. Currently, PJM's Reliability Assurance Agreements and Operating Agreement require each Load Serving Entity within PJM to procure its share of the Installed Reserve Margin which, for each Load Serving Entity, is equal to a specified amount of capacity above its forecasted peak load. This additional amount is determined by the PJM Board, and currently is equal to 15 percent of the forecasted peak load.[10] This requirement is intended to ensure the availability of sufficient capacity to guarantee reliability.

10. On August 31, 2005, PJM made a rate filing under sections 205 and 206 of the Federal Power Act (FPA)[11] to replace its existing capacity obligation rules with its

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[8] Each Load Serving Entity in PJM is required to demonstrate that it can supply, or has under contract, sufficient generation capacity to meet its projected peak load and to procure its share of PJM's Installed Reserve Margin. For each Load Serving Entity, that share of Installed Reserve Margin is equal to a specified amount (currently 15 percent) of capacity above its forecasted peak load. This requirement is intended to ensure the availability of sufficient capacity to guarantee the reliability of the PJM system. Under the capacity market created by the Settlement, Load Serving Entities may procure part or all of their required capacity through PJM's RPM auction process, under which generators, transmission providers and demand responders may make offers to supply capacity to PJM. The resources that are selected through this method will be required to commit capacity three years in advance, and the capacity selected will be deliverable to the Load Serving Entity, thereby providing stability to the market, and be priced pursuant to a downward sloping demand curve that reflects the amount of capacity within each local area.

[9] August 31 filing, Transmittal at 5.

[10] April 20 Order at P 9 n.7.

[11] 16 U.S.C. §§ 824d and 824e (2000).

proposed RPM construct. PJM stated in its August 31 filing that its existing capacity market had become unjust and unreasonable, in that it could no longer ensure that PJM would meet its reliability obligations. According to PJM, it had experienced steady load growth for several years, at the same time that many generators had retired due to their inability to recover sufficient revenues to cover their costs.[12] PJM stated that, as a result of these supply problems, it anticipated degraded reliability in Eastern PJM, particularly in New Jersey, the Delmarva Peninsula and the Baltimore-Washington area.[13]

11. As noted in the April 20 Order,[14] multiple reliability criteria violations in PJM, particularly in New Jersey, have occurred recently, primarily due to generation retirements. However, the potential for reliability criteria violations is not limited to New Jersey. PJM contends that present trends, if continued, will lead to violations in New Jersey, and spread to other areas of PJM where similar conditions exist. PJM estimates that in New Jersey load will increase by 1,950 megawatts (9.8 percent) between 2005 and 2010, but that generation additions are not expected to keep pace. In 2003 and 2004, only 51 megawatts of new generation were constructed in New Jersey, and only 1,340 megawatts are under construction. PJM further alleges that load growth in the Delmarva Peninsula is projected to be 2.7 percent per year, or an increase of 573 megawatts over the next five years, but planned generation additions are minimal. Only 60 megawatts were added on the Delmarva Peninsula in 2004, and 150 megawatts are being studied. In the Baltimore-Washington area, only 77 megawatts were added in 2004, and no additions are currently being studied.[15]

12. We further noted that PJM reports a spike in generation retirements within PJM. Between 1999 and 2002, 274 megawatts were retired in the Mid-Atlantic region. By contrast, from January 1, 2003 through June 22, 2005, 1,709 megawatts have been retired, and an additional 1,694 megawatts are proposed for retirement between 2006 and 2008. Of the retirements effectuated since 2003, and including those currently proposing to retire, forty percent are located in New Jersey. According to PJM, owners of retired generation point to excess generation in the western region of PJM and their inability to compete economically. PJM's witness Mr. Herling stated that these retirements have led to identified reliability criteria violations for 2005 and each succeeding year in the most

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[12] Bowring Affidavit at 15, Herling Affidavit at 7.

[13] April 20 Order at P 11.

[14] *Id*. at P 31.

[15] *See generally* Herling Affidavit at 7-8.

recent planning horizon, and that one hundred and one megawatts of generation were retired in the Baltimore-Washington area in 2003, resulting in likely reliability criteria violations for the Baltimore-Washington area and the Delmarva Peninsula in 2008.[16]

13. As noted in the April 20 Order, PJM had previously made extensive efforts to develop a stakeholder consensus to address its capacity problems. Ultimately, PJM's August 31 filing proposed to address the ineffectiveness of its current capacity market in eliciting a sufficient capacity supply in the following ways. First, PJM stated that, because its current construct was based on short-term capacity commitments, capacity resources were unable to anticipate a sufficient revenue stream to meet their going-forward costs, and in this way the current construct does not accurately reflect the value that capacity resources bring to the system by providing reliability.[17] PJM proposed to address this problem by requiring Load Serving Entities to make commitments to purchase capacity four years ahead, rather than one day ahead as is the case under the current requirement. Load Serving Entities would also be required to commit to purchase capacity for at least one year's duration.[18] To meet the capacity needs of Load Serving Entities that failed to procure enough capacity through self-supply or bilateral contracts, PJM proposed to hold an auction each year, in which PJM would procure the remainder of the capacity requirement. If adequate resources are not committed through the auctions for four consecutive delivery years, PJM stated that it would conduct a reliability backstop auction to ensure that sufficient capacity is procured.[19]

14. PJM further stated that its current capacity market is flawed because it allows Load Serving Entities to fulfill their capacity obligations by contracting with resources located anywhere within PJM, regardless of whether generation from those resources is actually deliverable to those Load Serving Entities' customers, or whether transmission constraints would prevent delivery. Thus, there is no price difference among resources in different locations to signal whether that capacity is more or less valuable due to its

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[16] *Id*.

[17] April 20 Orde*r* at P 31.

[18] *Id*. at P 14.

[19] *Id*. at P 55.

location. PJM proposed to establish up to 23 capacity zones, or Locational Delivery Areas,[20] and require Load Serving Entities to procure capacity from resources that would be deliverable to that Load Serving Entity's Locational Delivery Area.

15. PJM also proposed to integrate its capacity procurement program with its Regional Transmission Expansion Planning protocol and with demand side response, so that Load Serving Entities could satisfy their capacity obligations through purchasing capacity, merchant transmission upgrades, or development of demand side response.

16. As to the amount of capacity that PJM would require Load Serving Entities to purchase and the price for that capacity, PJM proposed to establish a Variable Resource Requirement for the Load Serving Entities in each Locational Delivery Area. The auction clearing model will set prices based on locational constraints, the submitted supply offers, and a Variable Resource Requirement Curve. Thus, depending on the amount of supply offered, the capacity requirement could be more, less, or the same as the Installed Reserve Margin under the current construct. The Variable Resource Requirement Curve provided for a price equal to the cost of new entry of a new peaking unit when the amount of capacity to be supplied is one percent greater than the Installed Reserve Margin, with prices rising when the amount of the capacity within the Locational Delivery Area fell, but falling when the amount of capacity within the Locational Delivery Area rose.[21]

17. Finally, PJM's proposal endorses allowing Load Serving Entities that are able to fully supply their own capacity needs to choose not to participate in the RPM program, and instead to use a long-term Fixed Resource Requirement option. Such Load Serving Entities would be required to procure the full amount of their capacity needs in advance for a one-year period, so that they would not need to take advantage of PJM's four-year-ahead procurement auction.[22]

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[20] *See* Appendix A for the 23 Locational Delivery Areas proposed by PJM.

[21] When a Locational Delivery Area's capacity level is more than 116 percent of peak load (*i.e.*, one percent greater than the Installed Reserve Margin), the price would fall until a capacity level of 120 percent of peak load is reached, at which point the price would fall to zero; at capacity levels less than 116 percent, the price would increase until the capacity level falls to 112 percent of peak load, at which point the price would reach two times the Cost of New Entry. April 20 Order at P 89-90.

[22] *Id.* at P 91.

18. PJM states that the limitations of the current capacity market have been recognized for some time, and that it had been working with stakeholders on capacity market reforms for several years, but no consensus had come out of these stakeholder processes. PJM states that in the summer of 2004, stakeholders invited PJM to devise a comprehensive solution which resulted in the initial version of RPM. However, despite stakeholder input and cooperation, stakeholder consensus was not obtained. [23]

B. April 20 Order and Initiation of Settlement Proceedings

19. In its April 20 Order, the Commission found PJM's existing capacity market to be unjust and unreasonable due to a combination of factors, and accepted certain elements of PJM's RPM proposal, but required further proceedings to resolve the remaining issues.

20. We found that PJM had demonstrated that its existing capacity market was not just and reasonable. We cited several factors leading to this conclusion, including: the lack of a locational component in PJM's capacity requirements, so that the price paid for capacity does not reflect the fact that some capacity is located in areas where it is needed, and other capacity is not; the lack of sufficient financial incentives for construction of new capacity; and lack of a requirement for long-term forward commitment of resources.[24] We stated:

> PJM has shown that the existing construct will, in the future, fail to achieve the intended goal of ensuring reliable service. It does not enable market participants to see the reliability problems in particular locations, does not provide price signals that would elicit solutions to reliability problems in enough time before the problems occur, and does not allow transmission and demand response to compete on a level playing field with generation to solve reliability problems. These factors, in conjunction with other factors (such as load growth in particular locations, and the lack of price signals sent by the energy markets) render PJM's current construct unreasonable on a long-term basis. While one or more of the elements of PJM's current capacity construct may exist and be just and reasonable in other regional transmission organizations, the Commission finds the combination of these elements, results in an unjust and unreasonable capacity construct within PJM.[25]

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[23] August 31 filing at 49-50.

[24] April 20 Order at P 22-24.

[25] *Id*. at P 29.

21. We also found, however, that we could not approve PJM's August 31 filing:

> While the Commission has determined that the capacity construct as it currently exists is unjust and unreasonable, it cannot at this time determine that the RPM capacity construct is a just and reasonable substitute. The Commission appreciates that this is a difficult issue, and recognizes the significant progress that has been made. However, the Commission finds that while the collective elements of RPM may provide a just and reasonable solution, many aspects of those elements need to be further analyzed and clarified before the Commission can rule on this matter.[26]

Therefore, the Commission required additional proceedings, namely, a technical conference and a paper hearing, to develop further facts to enable the Commission to rule conclusively on the August 31 filing.

22. While these additional proceedings were taking place, on May 17, 2006, the Commission granted a motion by AFPA to set this case for settlement judge proceedings. From June through September 2006, the parties engaged in intensive settlement negotiations..

23. On September 25, 2006, the parties voted on the Settlement that PJM is filing here. On September 29, 2006, pursuant to Rule 602 of the Commission's Rules of Practice and Procedure,[27] PJM and the Settling Parties filed the instant Settlement, including revisions to the PJM Tariff, Operating Agreement, and Reliability Assurance Agreement, and an Explanatory Statement.[28]

II. The Settlement, Protests And Comments

A. The September 29 Settlement

24. In the Explanatory Statement, PJM states that the Settlement resolves all issues regarding PJM's implementation of RPM. PJM asks the Commission to approve the

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[26] *Id*. at P 37.

[27] 18 C.F.R. § 385.602 (2006).

[28] *See* Appendix B to this Order for a list of the Settling Parties, and the parties who did not become settling parties but who stated that they would not oppose the Settlement.

Settlement on or before December 22, 2006, which PJM states will be necessary to enable it to conduct its first auction for the 2007-08 delivery year in April 2007 and thereby allow RPM to replace PJM's current capacity market on June 1, 2007. PJM also states that the Settlement makes changes to a number of RPM mechanisms, among the most salient of which are the Variable Resource Requirement curve, forward commitment, locational pricing, mitigation, and the Fixed Resource Requirement option, as discussed below. The Settlement is the end result of over 25 days of settlement discussions involving over 150 individuals representing over 65 parties and also involved active participation of Administrative Law Judge Brenner with the assistance of Steven Shapiro of the Commission's Dispute Resolution Service. Of the 89 parties that intervened in the original proceeding, 11 parties have formally opposed the Settlement.

1. Variable Resource Requirement Curve and Cost Issues

25. Under the Settlement, PJM will use a new Variable Resource Requirement Curve(Settlement Curve) to clear the RPM capacity auctions. It will still be a downward-sloping demand curve, as was proposed in the August 31 filing (so that the price for capacity increases as the amount of capacity falls below the Installed Reserve Margin, but decreases as the amount of capacity exceeds the Installed Reserve Margin). As modified, the Settlement Curve is designed to yield lower prices, at varying capacity requirement levels, than the August 31 Curve would have elicited, as either capacity surpluses or capacity shortages increase, except at a capacity level of the Installed Reserve Margin plus 1 percent (where the August 31 Curve and the Settlement Curve yield the same price equal to net Cost of New Entry). Similarly to the August 31 Curve, the Settlement Curve is expected to lead to reserve levels meeting or exceeding the Installed Reserve Margin.[29]

26. The Cost of New Entry, which is used to establish the Variable Resource Requirement curves of the proposed Locational Delivery Areas, will be administratively determined for the transition period at the levels proposed in the August 31 filing. The Settlement establishes the price on the Settlement Curve as equal to net Cost of New Entry when the market clears at the Installed Reserve Margin plus one percent. Further, the Settlement provides that Cost of New Entry will be offset by the net energy and ancillary services revenues, and establishes an adjustment mechanism that permits gradual changes in Cost of New Entry to reflect auction-clearing prices in a given area after the transition period. The prices at the boundaries of the three regions of the Settlement Curve (*i.e.*, capacity at the Installed Reserve Margin minus three percent, capacity at the Installed Reserve Margin plus one percent, and capacity at the Installed

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[29] Explanatory Statement to Agreement of the Settling Parties, filed September 29, 2006 (Explanatory Statement) at 7-9.

Reserve Margin plus five percent), are all calculated as the net Cost of New Entry times a multiplier. For example, when capacity is the Installed Reserve Margin minus three percent, the price on the SettlementCurve would equal net Cost of New Entry times a multiplier of one and one half. Thus, the height of the curve is determined in large part by net Cost of New Entry, which is Cost of New Entry net of the Net Energy and Ancillary Service Revenue offset.

27. In subsequent delivery years, the Settlement would allow Cost of New Entry to be adjusted to reflect empirical information on actual capacity market activity when there is a "net demand for new resources" over three consecutive delivery years. Net demand for new resources is defined to occur whenever the factors that increase demand for new entry (*i.e.*, load growth and generation retirement) exceed the initial surplus of capacity in the first year of the three-year period. The empirical information on actual capacity market activity would be developed in relation to the concept of an "equilibrium zone," which is a level of capacity between the Installed Reserve Margin and the Installed Reserve Margin plus two percent. If the capacity in the Base Residual Auction clears below the equilibrium zone, the Cost of New Entry would be increased. If capacity cleared above the equilibrium zone, Cost of New Entry would be decreased unless the quantity of capacity above the equilibrium zone stays constant or decreases over the three-year period. And if the capacity cleared falls within the equilibrium zone, no change would be made to Cost of New Entry. When these provisions require a change to the Cost of New Entry in a Cost of New Entry area, the amount of the change will be half the difference between the current Cost of New Entry value and "empirical Cost of New Entry" (but not to exceed 10 percent of the current Cost of New Entry value). Empirical Cost of New Entry is defined as the average of the clearing prices in the auctions for the Cost of New Entry area for the previous three years, plus the average of the Net Energy and Ancillary Services Revenue Offsets for that area over the three-year period. In an affidavit attached to the Settlement's explanatory statement, Paul R. Williams (on behalf of Portland Cement) states that the use of Empirical Cost of New Entry to adjust Cost of New Entry avoids the need for PJM Staff to make numerous assumptions regarding the size and configuration of likely new generation capacity investments. He argues that this approach is superior to the administratively-determined Cost of New Entry because it evaluates the Cost of New Entry value only after there has been a need for actual new entry, and thus, the clearing prices upon which Empirical cost of New Entry is calculated are driven by the offer prices of actual, new generation investment. The Settlement (at section III) adopts PJM's originally-filed tariff provisions that require PJM to evaluate

the need for changes to the Variable Resource Requirement Curve or its parameters at least every three years, to report on the performance of RPM within four and a half years after implementation and to take investigative action[30] if new entry does not emerge.

2. Forward Commitment

28. The Settlement retains a forward commitment of capacity proposed in the August 31 filing, but reduces the period of time between the Base Residual Auction and the start of the delivery year from four years to three years. The commitment period for capacity offered into the Base Residual Auction remains one year, as originally proposed by the August 31 filing. However, in response to concerns about providing incentives for new entry, the Settlement also proposes a New Entry Price Adjustment, under which certain new entrants in small Locational Delivery Areas where new entry has significant impact on prices may opt to receive their first-year clearing price for up to two additional years if certain conditions are met. If the seller chooses the New Entry Price Adjustment option, its offer sets the clearing price (also received by all other sellers) in the first year and, if its offer clears in a subsequent year, it receives the higher of its first-year offer price or the clearing price for that subsequent year. In delivery years after the first year, any payment to the seller above the clearing price will not increase the clearing price received by other sellers; rather, any such payment will be collected from all loads as a resource make-whole payment.[31]

3. Locational Pricing

29. A system for locational pricing, as proposed in the August 31 filing through the creation of Locational Delivery Areas, is retained by the Settlement, with some modifications. In the August 31 filing, PJM proposed to modify the current capacity market, which used a deliverability test for generation to reach load at the time of interconnection to the system, with the introduction of a locational element into the capacity market. PJM explains that, as the transmission capacity to import energy into a Locational Delivery Area becomes constrained, price separation will occur in capacity prices much as it does today in the day-ahead and real-time energy markets. The Settlement includes mechanisms to identify the existence of transmission constraints for pricing purposes. The Settlement establishes a default screen to determine whether to use a separate Variable Resource Requirement Curve for a Locational Delivery Area, and create a separate Variable Resource Requirement Curve for a Locational Delivery Area

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[30] *Id*. at 11.

[31] *Id*. at 25-26.

whenever the transfer capacity for the Locational Delivery Area is less than 105 percent of the amount that that Locational Delivery Area might need to import on an emergency basis. The Settlement preserves provisions of the August 31 filing that support self-supply and bilateral contracts through various means, including capacity pricing hubs and electronic forums for bilateral transactions, and eliminates two features of the August 31 filing, seasonal pricing and operational reliability requirements.[32]

30. To provide market participants with the potential price signaling benefits, PJM will calculate and post, for informational purposes only, the prices that would have resulted if all twenty-three Locational Delivery Areas were in place in years one through three. Thus, project developers will have information to guide their project scope and location decisions, and market participants will have additional information to help prepare their hedging strategies and business practices for the full RPM implementation of capacity markets with 23 Locational Delivery Areas.

4. Demand Response

31. The Settlement preserves the participation of demand response. RPM also preserves the current option of allowing Load Serving Entities to mitigate capacity obligations through demand response solutions certified as late as three months before the delivery year. Demand resources offered and cleared in a Base Residual or Incremental Auction will receive the corresponding Capacity Resource Clearing Price as determined in such auction, in accordance with Attachment DD of the PJM Tariff. In addition to the RPM auctions, demand resources may receive revenues for load reductions as Interruptible Load Resources. Interruptible Load Resources providers will receive compensation for demand response as much as market participants do today through PJM's Active Load Management rules. Maintaining this existing participation alternative will ensure that existing demand response participation does not diminish and thus will engender a more robust competitive capacity market. Additionally, under the Settlement, all demand response, load management or similar programs may be relied on by Fixed Resource Requirement Load Serving Entities if included in the Fixed Resource Requirement Capacity Plan.

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[32] However, the settlement requires PJM to file with the Commission to implement by June 2008 markets and/or market rules, outside of the RPM markets, to address the "Operational Reliability Requirements" described in the August 31 filing, namely load following (which includes cycling) and thirty minute reserves. The settlement makes clear that PJM must make such a filing, through a stakeholder process or, if that fails, unilaterally, in time to implement this provision by June 2008. *See* Explanatory Statement at 18.

32. The Settlement commits the Settling Parties to establish additional process within the PJM region for pursuing and supporting demand response and incorporating energy efficiency applications. The Settlement also commits the Settling Parties to establish a forum dedicated to increase coordination among PJM, state siting authorities, regulatory commissions, and PJM stakeholders to identify, evaluate, and hopefully rectify, any barriers to entry of investment in generation, transmission, and demand response.

5. Mitigation

33. The Settlement contains various tariff provisions to prevent the exercise of market power by sellers of planned and existing generation capacity resources. Mitigation under section 6 of the tariff lays out a framework to prevent existing capacity resources from exercising market power by either economic or physical withholding. To prevent economic withholding, the Tariff specifies rules for substituting a predetermined default competitive bid for offers under specified noncompetitive conditions. Several options for determining default competitive bids are available, including options that reflect recovery of investment costs. To prevent physical withholding, the Tariff specifies that all available capacity must be offered in the Base Residual Auction and incremental auctions to receive a capacity payment or satisfy a capacity obligation. Furthermore, section 6.6 (g) of the Tariff gives PJM's Market Monitor specific guidance on identifying physical withholding, and requires a filing with the Commission on an expedited basis to direct the seller to participate in the auction, or for other appropriate relief, if physical withholding occurs. In that case, auction results will be postponed until after the Commission acts.

34. The Tariff also contains provisions to address market power concerns associated with planned generation. These provisions distinguish between sellers that are net buyers that may have incentives to depress market clearing prices below competitive levels and sellers of planned generation that may have incentives to increase market clearing prices above competitive levels. For sellers that are also net buyers a Minimum Offer Price Rule described in section 5.14 (h) would apply. For other sellers of planned generation, section 6.5 (a) (ii) describes conditions and procedures that would allow the Market Monitor to reject a non-competitive offer.

35. Finally, the Settlement provides two aspects of mitigation that apply to settling parties only. First, during the three year transition period, signatories in certain circumstances have higher default bids than non-signatories. Second, signatories that must make a project investment to comply with a government requirement have more options for adjusting their default competitive bids to reflect investment cost recovery than non-signatories.

6. Fixed Resource Requirement Option

36. The Settlement includes a long-term Fixed Resource Requirement alternative for entities that prefer not to participate in the auctions and that meet certain requirements.[33] An investor-owned utility, electric cooperative, or public power entity may elect this alternative if it demonstrates the capacity to satisfy the entire capacity obligation for all load, including load growth, in the applicable Fixed Resource Requirement service area for the term of the entity's participation in the Fixed Resource Requirement alternative. A Load Serving Entity serving a single customer is also eligible for the Fixed Resource Requirement alternative, but only if the Load Serving Entity is a signatory to the settlement.[34]

B. Protests and Comments

37. Pursuant to Rule 602(f)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.602(f) (2006), parties were required to file initial comments on the settlement proposal on or before October 19, 2006, and reply comments on or before October 30, 2006.

38. On October 19, multiple parties filed comments supporting the settlement, and others filed comments opposing the settlement. Several parties filed reply comments and additional subsequent replies.[35]

III. Discussion

A. Procedural Issues

39. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. 385.213(a)(2) (2006), prohibits a reply to a reply, unless otherwise ordered by the decisional authority. We will accept PPL/PSEG's and Coral Power's replies to the reply comments, and PJM's reply to those replies, because they have provided information that

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[33] The Fixed Resource Requirement alternative applies only to the ability of a Fixed Resource Requirement entity to meet its capacity obligations and does not affect the ability of a Fixed Resource Requirement entity to participate in any other PJM markets.

[34] Explanatory Statement at 42-43; Settlement, section II.O.1 at 33.

[35] *See* Appendix C for list of parties filing comments on the Settlement.

assisted us in our decision-making process. Based on similar considerations, although PJM is correct that DEMEC's comments in opposition to the settlement were filed beyond the date provided by Rule 602(f), we will deny PJM's motion to strike DEMEC's comments. We will accept DEMEC's comments and the late-filed initial comments of the Indiana Commission in support of the settlement because they assist us in our decision-making process.

B. Requests for Rehearing of the April 20 Order

40. In the April 20 Order, the Commission found that the existing capacity market in PJM is unjust and unreasonable, and established proceedings to consider the just and reasonable replacement for that capacity market.

41. The Settlement provides that:

> [t]he amendments to the PJM Tariff, the Operating Agreement, RAA, West RAA and RAA South set forth in Attachments A through F to this Settlement Agreement implement the terms and conditions of this Settlement Agreement and are incorporated as part of this Settlement Agreement. Unless otherwise provided in this Settlement Agreement, *the provisions in the August 31 filing apply*.[36]

42. Thus, the Settlement replaces the RPM proposal filed by PJM on August 31, 2005 as a just and reasonable replacement for its existing tariff provisions. As a result, the requests for rehearing of the Commission's Initial Order on the August 31 filing regarding various aspects of PJM's proposed replacement for its current capacity market have become moot, and we dismiss them on that basis.[37] However, the Settlement is not clear

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[36] Settlement, section V at 46 (emphasis added); *see also* Explanatory Statement at 5-6.

[37] *See Florida Gas Transmission Co.*, 53 FERC ¶ 61,396 (1990), in which Florida Gas Transmission filed a rate settlement which was rejected by the Commission, parties sought rehearing of the Commission's order rejecting the settlement, and Florida Gas Transmission subsequently filed a second settlement proposal. The Commission accepted the second settlement and stated that "[b]ecause the settlement replaces the [first settlement proposal] and resolves all of the issues that are the subject of the requests for rehearing without opposition from the parties filing the rehearing requests, the [rehearing] requests are dismissed as moot." I*d.* at 62,375.

whether the parties agreed to settle issues relating to the Commission's finding in the April 20 Order that the existing PJM capacity market is unjust and unreasonable. We, therefore, will address the rehearing requests related to that finding.[38]

1. Requests for Rehearing

43. Several rehearing requesters challenged the Commission's finding that PJM's current capacity market is not just and reasonable. CCR stated that PJM had failed to demonstrate that its current construct provided insufficient incentives to generators; CCR also asserted that the only area within PJM that suffered from current reliability problems (New Jersey, the Delmarva Peninsula, the Baltimore-Washington corridor) was relatively small. CCR also argued that the Commission's focus on the lack of a locational component in PJM's current capacity market failed to recognize that the true cause of PJM's capacity problems is insufficient transmission capacity. PJMICC similarly asserted that the Commission's finding was flawed because it did not delve sufficiently deeply into the root causes of capacity shortages in PJM. The Pennsylvania and Delaware Commissions argued that the Commission's conclusion that PJM's current capacity market fails to create incentives for generation investment is without detailed on-the-record findings and based upon assertions not subject to testing and cross examination. AMP-O/Easton argued that the Commission improperly relied on the consensus of multiple parties in making its finding and that substantial evidence did not support that finding, especially with regard to the need for a locational component.

2. Commission Determination

44. The Commission denies the rehearing requests. In its August 31 filing, PJM stated that its current capacity market is no longer just and reasonable because it fails to assure that reliability will be maintained at a reasonable cost. As discussed above, PJM identified three specific issues as the causes of this dysfunction. First, the current system does not contain a locational element. PJM stated that as a result, the price paid by Load Serving Entities for capacity does not vary by location or reflect that capacity is not always universally deliverable throughout PJM. Thus, the price does not reflect the differing values of capacity in different locations, and does not incent new capacity in that location, thereby threatening reliability. Second, PJM stated that its current capacity market does not provide sufficient revenue to stimulate construction of new capacity or retention of current capacity. And, finally, PJM asserted that its current construct does not provide for a sufficient forward commitment for capacity to provide a meaningful

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[38] *See* Appendix D for a list of the parties who sought rehearing on that issue.

forward price signal for capacity suppliers. The Commission subsequently found in the April 20 Order, because of the combination of these and other factors, we found the current capacity market to be unjust and unreasonable.[39]

45. PJM supported each of these assertions. With regard to the locational issue, PJM pointed to the fact that there have been few generation additions, but high rates of generation retirements, in the portions of PJM where load is growing the fastest. PJM's witness Mr. Andrew Ott stated that as a result, New Jersey will experience possible reliability criteria violations in each of the next four years, and other parts of Eastern PJM (including the Baltimore-Washington area and the Delmarva Peninsula) are trending toward similar violations. Moreover, PJM argued, it has an aging generation fleet which will cause the problem to expand both geographically and temporally.[40]

46. PJM further provided evidence that the current capacity market fails to provide sufficient financial incentives for capacity additions.[41] PJM provided evidence that daily prices in the PJM capacity credit market have been at or near zero for most of the 2000 – 2004 period, with occasional spikes (some lasting multiple months) of well over $100 per megawatt-day; additionally, PJM's Market Monitor provided an affidavit stating that net revenues to generators from all sources have been insufficient to cover the cost of investment in the most efficient marginal capacity unit, *i.e.*, a gas turbine peaking unit.[42] PJM further provided an affidavit from Dr. Benjamin Hobbs, demonstrating that PJM's current pricing mechanism, under which capacity prices drop dramatically if supply exceeds the Installed Reserve Margin by a small number of megawatts, and spike equally dramatically if supply is less than the Installed Reserve Margin by a small number of megawatts, leads to highly volatile capacity prices.[43]

47. PJM also showed that its current rules do not allow for a sufficiently long-term forward commitment to create a meaningful forward price signal for suppliers. While

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[39] April 20 Order at P 29.

[40] *See* August 31 filing, Transmittal at 5-6; *see also* comments of Mr. Andrew Ott, PJM at Technical Conference on Reliability Pricing Model in Docket Nos. ER05-1410-000 and EL05-148-000, February 3, 2006, transcript at 47.

[41] August 31 filing, Transmittal at 6-8.

[42] Bowring Affidavit at 10-16.

[43] *See generally* Hobbs Affidavit.

many Load Serving Entities meet their capacity obligation through bilateral contracts, the remaining capacity needs within PJM are met through purchases in PJM's Capacity Credits Markets. As PJM noted, under its current rules, it administers Capacity Credit Markets only for 12 months; moreover, capacity resources can opt out of that status with only 36 hours' notice.

48. Thus, contrary to AMP-O/Easton's assertion, the Commission did not rely solely on the consensus among PJM parties to find that the current capacity market is not just and reasonable. As noted above, the Commission relied on a number of factors to find the current capacity market unjust and unreasonable. The Pennsylvania and Delaware Commissions state that the Commission should have engaged in more extensive fact finding and cross-examination, but they do not challenge the factual assertions that PJM has put forward. As discussed above, the Commission has a substantial record showing that the existing capacity market leads to volatile prices, and does not provide incentives for generators to locate in the geographical areas where they are most needed.

49. CCR does not contest PJM's broader assertion that reliability problems will spread over time, but argues that PJM's current reliability problems are limited to a small geographical area. CCR's argument that PJM is, in essence, creating a pool-wide locational market to address problems limited to small areas is incorrect. As discussed above, PJM explained in its August 31 filing that the limitations of the current capacity market may result in multiple reliability criteria violations in Eastern PJM, particularly in New Jersey, the Delmarva Peninsula, and the Baltimore-Washington corridor as early as 2006. Contrary to CCR's view, this is not a small area; rather, it is a significant area both geographically and economically. Further, under the Settlement, the solution to PJM's long-term reliability problems will create higher prices in some areas and lower prices in others, so that even though customers in some Locational Delivery Areas will experience higher prices, customers in other Locational Delivery Areas will see lower prices.

50. The Pennsylvania and Delaware Commissions, CCR and PJMICC also advance theories for why PJM's current capacity market is not working that are different from PJM's analysis.[44] But in any case, the rehearing requesters recognize that the existing construct is not working. As noted above, due to the lack of a locational element to PJM's current capacity market, generating capacity located in congested areas now are

[44] As noted above, CCR and PJMICC claim that PJM's capacity problems are the result of insufficient transmission capacity, and PJMICC further places the blame on siting and environmental restrictions for new generation, and the failure of Locational Marginal Pricing to send sufficient price signals to stimulate new investment in generation.

not receiving sufficient revenues to keep them in operation,[45] and sufficient revenues are not being provided to incent new entrants to locate in these areas. This problem may be limited to specific highly-congested areas now, but there is substantial record evidence indicating that additional PJM areas also are likely to become highly congested. The Commission finds that PJM sufficiently demonstrated that its existing capacity market is not just and reasonable, and the rehearing petitioners have not brought forward evidence or other material sufficient to undercut that finding.

C. The Settlement Proposal

51. The Commission approves the Settlement, with modifications as discussed below. Moreover, as discussed below, we find that, with the conditions added here, the Settlement provides for a just and reasonable capacity market. Further, we recognize that, as many parties have stated,[46] PJM and its members engaged in extensive negotiations to resolve the many difficult questions contained in this Settlement, and went to great lengths to arrive at compromises that were acceptable to the majority of PJM members.

1. Legal Standard for Accepting a Settlement

52. Rule 602(h)(1)(i) of the Commission's rules of practice and procedures provides that the Commission may decide the merits of a contested offer of settlement if the record contains substantial evidence upon which to base a reasoned decision.[47] Where a settlement is contested, the Commission must make "an independent finding supported by "substantial evidence on the record as a whole" that the proposal will establish "just and reasonable" rates.[48] The Commission has established a number of approaches for

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[45] *See* Herling Affidavit at 7-8.

[46] *See* Explanatory Statement at 3-4; *see also* Report on Contested Settlement by Settlement Judge at P 21 (November 9, 2006), footnotes omitted (judge notes "the overwhelming level of support achieved by the Settlement" and that "out of thirteen states and the District of Columbia in the PJM region, entities affiliated with only three states, and only two state commissions, oppose the Settlement, [and] only six market participants oppose the Settlement").

[47] 18 C.F.R. § 385.602(h)(1)(i) (2006).

[48] *See New Orleans Public Service, Inc*. v. *FERC*, 659 F.2d 509, 511-12 (5th Cir. 1981), *citing Placid Oil Co*. v. *FPC*, 483 F.2d 880, 893 (5th Cir. 1973), *aff'd sub nom. Mobil Oil Corp. v. FERC*, 417 U.S. 283, 314 (1974).

reviewing contested settlements based on the individual factual circumstances of each case.[49] Under the first approach explained in *Trailblazer*, the Commission can address the settlement provisions on the merits. This approach is appropriate where the issues are primarily policy issues or the parties have agreed that the record is sufficient to decide the issues on the merits. Under the second approach in *Trailblazer*, the Commission may approve a contested settlement as a package if the overall result of the settlement is just and reasonable and contesting parties' rates are "no higher than any just and reasonable rate the Commission could establish after full litigation of the case on the merits."[50]

53. PJM, on behalf of the Settling Parties, maintains that the standard of review for this proposal should be the just and reasonableness of the Settlement. However, in Reply Comments, PJM argues that under the second approach of *Trailblazer*, the Commission "need not find that the settlement rate is exactly the rate the Commission would find just and reasonable on the merits after litigation, and need only find that the settlement rate falls within a zone of reasonableness." PJM argues that the Commission may approve the Settlement as a complete package because the overall package falls within a zone of reasonableness.

a. Protesters' Arguments

54. PPL/PSEG argue that the record in this proceeding contains evidence sufficient for the Commission to issue a reasoned ruling on the merits.[51] PPL/PSEG and Coral Power also contend that the Commission's standards set forth in *Trailblazer* apply to this proceeding, but disagree with PJM and others that the Settlement can be approved pursuant to the second, third or fourth approaches of *Trailblazer*. PSEG/PPL argue that these other approaches are not available in this proceeding because their protests raise serious and legitimate concerns about the adequacy of the Settlement to meet the goals of RPM and comply with the Commission's April 20 Order. These protestors also argue that the Settlement is likely to leave the contesting parties in a worse position than if the case were decided on the merits.

55. PHI argues that the Commission may approve the Settlement under the second approach in *Trailblazer* if the overall result of the settlement is just and reasonable.

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[49] *See Trailblazer Pipeline Co.*, 85 FERC ¶ 61,345 (1998), *reh'g denied*, 87 FERC ¶ 61,110 (1999) (*Trailblazer*).

[50] *Id*. at ¶ 62,342-43.

[51] PSEG/PPL comments at 38.

However, PHI also argues that if the Commission uses the first approach in *Trailblazer*, there is substantial evidence in this record upon which the Commission can base a reasoned decision on the merits.

56. BP Energy argues that the applicable standard of review, regardless of the level of support for the Settlement, is the just and reasonableness of the settlement. BP Energy contends that the Commission's obligation is to ensure that the Settlement "does not represent the triumph of the tyranny of the power of the majority over the valid concerns of isolated minorities."

b. Commission Determination

57. We will review the Settlement under the just and reasonable standard of review, and will accept the Settlement subject to conditions, as discussed below. Because of the need to modify the Settlement, we cannot accept the Settlement under the second Trailblazer approach, as advocated by PJM and the Settling Parties.

58. However, as PJM, PPL/PSEG, and PHI recognize, there is a substantial record in this proceeding to enable us to review the Settlement and determine whether it is just and reasonable. The record includes the original filing, protests to that filing as well as the technical conference record and additional submissions by the parties on the issues raised by PJM's filing.[52] In addition, parties have submitted additional evidence and information in the Settlement filing as well as in the pleadings contesting the settlement. The Commission finds that this record is sufficient to rule on the proposed Settlement, and that with conditions, the Settlement provisions establish a just and reasonable capacity market. We, therefore, describe and evaluate below each of the contested elements of the Settlement, and make a determination whether the provisions are just and reasonable, taking into account the integrated nature of the capacity market design.

2. Locational Requirement and Transition Proposal

59. The Settlement provides a transition from the existing capacity market to RPM so as to allow market participants to realign their contractual obligations to meet the new capacity market. In comparison to the August 31 filing, which proposed two Locational

[52] The various aspects of the Settlement, although differing in some details, are very similar to the original proposal made by PJM, so that the originally created record can be used in analyzing the Settlement.

Delivery Areas for year one, four Locational Delivery Areas for year two[53] and twenty-three Locational Delivery Areas for year three and after, the Settlement uses the four Locational Delivery Areas of the August 31 filing to phase-in the Locational Delivery Areas in years one through three with the full complement of Locational Delivery Areas in year four. Therefore, under this schedule, all 23 Locational Delivery Areas will be established for the delivery year 2010-2011, providing for a shorter transition period than that provided by the August 31 filing.

a. Protesters' Arguments

60. While raising opposition to the settlement in general, the New Jersey Commission supports the transition to 23 Locational Delivery Areas after three years.

61. BP Energy states the settlement fails to incorporate appropriate mitigation for pre-existing state sponsored contracts, as was proposed in the August 31 filing. BP Energy requests the Commission to have two Locational Delivery Areas in the first delivery year of the transition period, as was proposed in the August 31 filing. BP Energy states that it has entered into multiple-year fixed price retail service contracts in the New Jersey markets, which extend through May of 2008. BP Energy further explains that the August 31 filing provided for a transition period to provide a measure of mitigation of any adverse impacts the establishment of the RPM construct may have on such contracts. This mitigation was in the form of a transition period which placed BP Energy in one of two Locational Delivery Areas for the first delivery year and in one of four Locational Delivery Areas for the second delivery year.[54] Transition to the full complement of Locational Delivery Areas was to be effective in the third year. Under the Settlement, the four Locational Delivery Areas will be used for the entire transition period.

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[53] The four Locational Delivery Areas proposed for the second year consisted of: (1) Southwestern MAAC (Potomac Electric Power Co and Baltimore Gas & Electric Co); (2) Eastern MAAC (Public Service Electric And Gas Co, Jersey Central Power & Light Co, Philadelphia Electric Co, Atlantic Electric, Delmarva Power & Light, and Rockland Electric); (3) the MAAC Region plus APS (SW MAAC and Eastern MAAC plus Pennsylvania Electric, Metropolitan Edison, PPL, and Allegheny Power); and (4) the remaining zones in the PJM Region (Commonwealth Edison, American Electric Power, Dayton Power & Light, Dominion-Virginia Power, and Duquesne Light).

[54] Delivery year one was defined as (2006/2007 capacity market): (1) Mid-Atlantic Area Council (MAAC) Region and APS; and (2) ComEd, AEP, Dayton, Dominion and Duquesne. Delivery year two would use four Locational Delivery Areas as proposed in the Settlement and described *supra*.

62. Coral Power argues that a separate Dominion-Virginia Power Locational Delivery Area should be created before 2010. Coral Power protests grouping of the Dominion-Virginia Power zone with several other zones in western PJM for the first three years after RPM is implemented. Coral Power argues that Dominion-Virginia Power is electrically separated from these areas and that the proposed Locational Delivery Area designation ignores the major internal transmission constraints that RPM is supposed to address.[55] Coral states that the transition will deny them access to the higher prices expected in the Locational Delivery Area(s) serving the Mid-Atlantic region. Coral Power requests the Commission to establish and recognize the Dominion-Virginia Power Locational Delivery Area at the outset of RPM implementation, *i.e.*, in time for the 2007-2008 delivery year.

63. JP Morgan, with support from BP Energy in reply comments, argues for a transition mechanism that will result in greater market transparency and limit rate shock. JP Morgan states that the absence of a phase-in of RPM denies suppliers an opportunity to familiarize themselves with RPM over a period of time in which price transparency can develop and the nuances of market mitigation and the energy and ancillary services offsets are better understood.

64. In reply comments, DEMEC protests that although the intent of RPM is to send price signals to incent the development of more local capacity, this objective is contrary to the concept of a regional transmission organization which is to locate generation where it is technically feasible, most economic and least detrimental to the environment. Further, DEMEC argues that RPM will unduly interfere with market forces.

65. Also in reply comments, PHI and Capacity Buyers and Suppliers state that the provisions of the transition proposal reasonably phase in the RPM capacity market and mitigate rate shock. PHI points to several elements of the transition, such as the use of only four Locational Delivery Areas for the first three years, use of the initial Cost of New Entry value for only the first four years, and the fact that the energy offsets will be based on historic six year data for only the first three years. PHI states that a transitional payment structure, as requested by JP Morgan, is not required and is not supported by the record in this case. Further, with respect to BP Energy's demand for a transitional mechanism to protect existing contracts, PHI notes that the Settlement includes a mechanism for converting existing capacity credit contracts into base capacity under RPM. PHI argues that the transition mechanism that BP proposes will undermine the locational feature of RPM, and urges the Commission to reject requests for additional transition mechanisms. Capacity Buyers and Suppliers also state BP Energy is not

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[55] Coral Power comments at 1.

entitled to any special transition deals to rescue it from its ill-advised contracting strategy. Capacity Buyers and Suppliers note that other market participants with "preexisting state-sponsored contracts" have taken no issue with the Settlement and have not sought the same additional transition mechanisms. PJM also states in reply comments that BP Energy has been aware of the transition since the August 31 filing and, further, the schedule for transition has been altered only to the extent that BP Energy will have two additional years of transition rather then suffering any loss of transition. PJM also points out that BP Energy did not protest the original schedule, nor did it raise objection in the paper hearing or technical conference.[56]

66. With respect to Coral Power, PJM states that Coral Power has not made its case that its capacity is within a local constraint and, thus, is not deliverable to loads within the Locational Delivery Area. PJM states that there are no violations of load deliverability criteria to the Dominion-Virginia Power Locational Delivery Area. Further, PJM states that import capacity into the Dominion-Virginia Power Locational Delivery Area is such that price separation cannot occur with respect to AEP, ComEd, Dayton or Duquesne, and thus, Coral Power is not deprived of any revenues. Lastly, PJM has stated that, even though the full complement of Locational Delivery Areas will not be in effect until delivery year four, the four Locational Delivery Area capacity market will provide additional compensation for capacity resources during the transitional period.[57]

67. PJM addresses JP Morgan's request for a more temperate phase-in by noting that this would defeat the very purpose of the new capacity market in the region where it is most needed. Additionally, PJM notes that in cases cited by JP Morgan where the Commission has accepted transitional mechanisms, those mechanisms accepted are the proposal of the filing parties and not one imposed *de novo* by the Commission.[58] Lastly, PJM states that JP Morgan has not shown that its proposal, which lacks any specificity, provides a better balance of equity issues than does that arrived at by the settling parties.

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[56] PJM reply comments at 8.

[57] *Id.* at 8-16.

[58] *See* JP Morgan comments at 9, citing *Northeast Utilities Service Company*, 116 FERC ¶ 61,011 (2006); *California Independent System Operator Corporation*, 111 FERC ¶ 61,337 (2005); and *Colorado Interstate Gas Company*, 104 FERC ¶ 61,334 (2003).

b. **Commission Determination**

68. The Commission finds that the locational pricing phase-in provisions of the settlement as proposed are just and reasonable. The Settlement addresses the Commission's concerns that appropriate price signals are available to provide incentives to construct facilities necessary for regional reliability by assuring that the market value of resources used to meet the capacity requirements reflect actual deliverability and availability of the capacity resource within the specific region relying on that resource. The Commission also finds that the use of a transition period is just and reasonable as it provides for regional pricing prior to implementation of the full division of PJM into 23 Locational Delivery Areas, and allows the participants in the market a period of time to understand and get used to the dynamics of the new capacity market prior to its full implementation.

69. We are not persuaded by DEMEC that the creation of LDAs will interfere with the goals of regional transmission organizations. These regional structures were intended to explicitly recognize transmission constraints and resolve them as efficiently as possible. The creation of LDAs is a central element of PJM's RPM proposal to address transmission constraints by creating accurate price signals to incent new generation. It is designed to encourage market signals, not interfere with them.

70. BP Energy protests the transition period as it applies to existing state-sponsored contracts and the elimination of the two Locational Delivery Areas in the first delivery year. At the time BP Energy signed its contracts,[59] those contracts had been subject to the possibility that the transition period would change as the capacity market was considered by the Commission. Thus, it accepted the risk of a changed capacity market. Moreover, because the starting date of RPM as proposed in the August 31 filing has been changed, concerns raised by BP Energy for delivery year One (set by the August 31 filing as 2006-2007) are no longer valid.

71. PJM's August 31 filing proposed two Locational Delivery Areas in the first delivery year (2006/2007), four Locational Delivery Areas in the second delivery year (2007/2008), and 23 Locational Delivery Areas thereafter, which was concurrent with the contract term of BP Energy's state sponsored contracts. BP Energy had notice of this proposed transition timeline and in fact, did not oppose the August 31 filing transition

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[59] Prior to the August 31 filing, BP Energy participated in state-sponsored auctions for fixed price retail service contracts. It assumed service obligations under two agreements in New Jersey that became effective from February 22, 2005 through May 31, 2008. *See* BP Energy comments at 4-5.

schedule. BP Energy would have been subject to the four Locational Delivery Area market in the 2007-2008 delivery year, which is also what will occur under the Settlement. Accordingly, BP Energy's position is not harmed by the Settlement since it is facing the same transition period in 2007-2008 that it would have faced under PJM's initial proposal, to which it agreed. Indeed, BP Energy will benefit from a transition period that is two years longer than under PJM's initial schedule proposed in its August 31 filing.. The Commission therefore finds that BP Energy has not been disadvantaged, but rather, has gained additional transition time for adjusting to the new capacity market.

72. With respect to Coral Power's arguments, we deny their request to recognize Dominion-Virginia Power as a stand-alone Locational Delivery Area in the first delivery year. To single out a single Locational Delivery Area (Locational Delivery Areas as defined by PJM for the purpose of the capacity market) for such recognition, solely to accelerate the schedule under which a single group of capacity suppliers would begin earning higher revenue more quickly, would treat those suppliers in a preferential manner and would discriminate against other market participants. The Commission has approved similar transition mechanisms previously as just and reasonable and finds no compelling argument in Coral Power's protest not to approve the transition as proposed here also.

73. JP Morgan requests an even longer transition treatment. However, JP Morgan has not shown that the proposed transition period is unjust and unreasonable. The adoption of a transition period must strike a reasonable balance between the need to implement RPM to generate relevant prices, and the provision of some period to enable parties to understand and make adjustments to the new market. The Settlement proposal adds several features to the locational market and the transition in response to market participants' concerns. Among them are formal markets for exchange of capacity obligations and the posting of individual Locational Delivery Area market auction results (for information only) during the transition to allow market participants to acquaint themselves with market dynamics. The Commission cannot find that the proposed Settlement, to which PJM and most of the parties agreed, strikes an unjust and unreasonable balance.

3. Challenges to the Use of A Downward-Sloping Demand Curve

a. Protesters' Arguments

74. Some parties argue that the downward-sloping demand curve contained in the Settlement will produce prices that are too high to be just and reasonable. BP Energy and DEMEC state that the Settlement Curve will result in excessive prices for generators in

Eastern MAAC, compared with prices in the rest of PJM,[60] and that a new program providing revenue incentives to generators is not necessary to elicit new entry in New Jersey. JP Morgan, the New Jersey Commission and the Virginia Commission also argue that the provisions of the Settlement will raise prices without improving reliability. Maryland People's Counsel similarly states that "[t]he prime driver of the cost impact on customers is the imposition of a sloping demand curve"[61] and argues that Dr. Hobbs' model does not demonstrate that the Settlement Curve will maintain generation adequacy in the PJM region while mitigating the near-term cost impact to consumers. Maryland People's Counsel asserts that greater price certainty for new units could be achieved by other methods that do not involve raising prices for all generation, pointing to the proposal by its witness Jonathan Wallach to grant the New Entry Price Adjustment to new entry, but not to enable the New Entry Price Adjustment- to set the market clearing price.[62]

b. <u>Commission Determination</u>

75. The Commission finds that the use of the SettlementCurve is just and reasonable. The Commission has previously accepted the use of a downward-sloping demand curve as just and reasonable in the NYISO capacity market,[63] and the reasons that we

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[60] BP Energy asserts that, during the transition period before new generation enters the market, while in the non-constrained portions of PJM prices will be in the $10 a megawatt day range, a marginal resource in New Jersey (which is within Eastern MAAC) could raise prices as high as $105 a megawatt day. BP Energy comments at 23.

[61] Maryland People's Counsel comments at 4.

[62] *See* affidavit of Mr. Jonathan Wallach attached to Maryland People's Counsel comments.

[63] *New York Independent System Operator, Inc.*, 105 FERC ¶ 61,108, at P 39 (2003) ("[t]he Commission considers the ICAP Demand Curve to be an appropriate new tool in providing reliable service to consumers"), *aff'd Electricity Consumers Resource Council* v. *FERC*, 407 F.3d 1232 (D.C. Cir. 2005) (*ELCON*). A Commission administrative law judge also found a downward-sloping demand curve just and reasonable for the ISO New England capacity market, *see* Initial Decision, *Devon Power L.L.C.*, 111 FERC ¶ 63,063, at P 284 (2005). The New England case, however, was ultimately resolved through a settlement that did not include a downward-sloping demand curve. *Devon Power L.L.C.*, 115 FERC ¶ 61,340 (*Devon Power*), *order on reh'g*, 117 FERC ¶ 61,133 (2006).

articulated there for accepting as just and reasonable a downward-sloping demand curve apply for PJM. A downward-sloping demand curve would reduce capacity price volatility and increase the stability of the capacity revenue stream over time. This is because, with a sloped demand curve, as capacity supplies vary over time, capacity prices would change gradually. By contrast, under the current capacity market, capacity prices vary substantially between the deficiency charge and zero even though supply varies only slightly between a slight deficit below the Installed Reserve Margin and a slight surplus above the Installed Reserve Margin. 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.

76. In addition, we agree with PJM that a downward-sloping demand curve provides a better indication of the incremental value of capacity at different capacity levels than the current vertical demand curve. Under a vertical demand curve, capacity above the Installed Reserve Margin is deemed to have no value. Incremental capacity above the Installed Reserve Margin is likely to provide additional reliability benefits, albeit at a declining level. This value is reflected in the positive (but declining) prices in the sloped demand curve to the right of the Installed Reserve Margin, but is not reflected in the current capacity market. Finally, as we discussed in orders in which a sloped demand curve was approved for NYISO, a sloped demand curve would reduce the incentive for sellers to withhold capacity in order to exercise market power when aggregate supply is near the Installed Reserve Margin.[64] Withholding capacity would be less profitable under a sloped demand curve because withholding would result in a smaller increase in capacity prices. By contrast, under the existing capacity market, small changes in capacity near the Installed Reserve Margin can result in a very large capacity price increase, so that withholding can be significantly more profitable under these supply conditions.

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[64] *New York Independent System Operator, Inc.*, 103 FERC ¶ 61,201, at P 67 (2003) ("The Commission agrees that the removal of the 'boom-bust' nature of the ICAP market will significantly reduce the incentive to withhold when ICAP supply and demand are relatively close"). Subsequently, in an order reviewing NYISO's implementation of its demand curve, the Commission noted that "NYISO indicates that it has not observed, in the short time since the implementation of the ICAP Demand Curve, significant economic or physical withholding in the Installed Capacity market," and that "NYISO reports that the ICAP Demand Curve has reduced the incentive to withhold capacity, because the Market-Clearing Prices are not significantly affected by reductions in the amount of capacity bid into the market." *New York Independent System Operator, Inc.*, 108 FERC ¶ 61,280, at P 5 (2004).

77. Maryland People's Counsel correctly points to the fact that many considerations determine whether private investment will respond to market conditions. We agree that the Variable Resource Requirement construct alone is not sufficient to provide appropriate incentives for efficient investment decisions – whether new entry or a retirement decision is at stake. However, revenues from a well-designed and reliable capacity market are one important element supporting efficient private investment.[65] The Commission has already determined that PJM's current capacity market is not just and reasonable, and must be supplemented with "out-of-market" Reliability Must Run contracts, because units necessary for reliability would otherwise have been withdrawn from service. The Commission finds that it would be imprudent to delay implementing a solution. Furthermore, we do not agree that a proposal such as that offered by Mr. Wallach, which would provide additional payments to new generators but not to existing generators, would support our objective of achieving an efficient market overall. Mr. Wallach's alternative relies more on side payments to individual new units and does not treat all capacity suppliers equally. In a competitive market, all suppliers will be paid the same price. This approach better approximates a market than the mechanism proposed by Mr. Wallach, which will not provide incentives to existing capacity to stay in the market. Thus, the Wallach approach is more likely to force suppliers to seek Reliability Must Run contracts, which the Commission disfavors.[66]

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[65] *PSEG Energy Resources & Trading, L.L.C.*, Docket No. ER05-644-000 (letter order issued June 20, 2006) and *Orion Power Midwest*, 117 FERC ¶ 61, 049 (2006), *clarification pending*. *See also* ELCON at 1241 (recognizing that capacity payments are needed to retain existing generation).

[66]*See Devon Power, LLC*, 103 FERC ¶ 61,082 at P 29 (2003):

> [Reliability Must Run]contracts suppress market-clearing prices, increase uplift payments, and make it difficult for new generators to profitably enter the market. That is because under current market rules, . . . expensive generators under [Reliability Must Run] contracts receive greater revenues than new entrants, who would receive lower revenues from the suppressed spot market price. In short, extensive use of [Reliability Must Run] contracts undermines effective market performance. In addition, suppressed market clearing prices further erode the ability of other generators to earn competitive revenues in the market and increase the likelihood that additional units will also require [Reliability Must Run] agreements to remain profitable.

78. We disagree with JP Morgan and others who argue that the Settlement will raise prices without improving reliability. Dr. Hobbs' study indicates that the Settlement's sloped demand curve will result in a more reliable system and at a lower customer cost than the vertical demand curve under the status quo. The Commission finds this evidence persuasive. The Settlement's sloped demand curve will provide more stable and predictable capacity revenues to generators over time, which will encourage more capacity to be built at more favorable terms than under the vertical demand curve. While customers may buy more capacity under the Settlement Curve than under the status quo, the price of the capacity will be lower because of lower financing costs. And, because more generation capacity will be in place, prices in the energy markets will be lower, resulting in lower energy bills to customers.

4. Challenges to the Settlement Curve

a. Protesters' Arguments

79. PPL/PSEG states that the Settlement Curve is inferior to the curve contained in PJM's August 31 filing in that it produces prices that are too low. According to PPL/PSEG, the Settlement Curve will result in lower prices than the August 31 Curve, thus leading to more generation retirements and blunting the price signal to incent new capacity suppliers to enter. Therefore, PPL/PSEG asserts, the Settlement Curve will do nothing other than give current generators higher compensation than they receive now, without obtaining the benefits for customers that were the goal of the RPM plan. PPL/PSEG further states that the Settlement Curve will result in less reliability than the August 31 Curve.[67] NRG argues that the Settlement Curve is so steep that it will create an overly volatile cycle, in that a small change in the amount of capacity in the market could significantly change the price at which the market will clear. Thus, NRG argues, the Settlement's capacity market will cycle between attracting insufficient amounts of investment, and then too much investment, so that prices will continue to change in a highly volatile fashion. In particular, NRG is concerned about bids that "crash" the market.

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[67] PPL/PSEG argues that "based upon multiple simulations and sensitivity analyses conducted by [PJM's] witness Professor Hobbs, . . . the total consumer costs resulting from the [Settlement Curve], at $82 kilowatt-year, are higher than the $79 kilowatt-year cost produced by the originally-proposed Variable Resource Requirement curve . . . [and] the [Settlement Curve] not only imposes higher overall consumer costs than its original RPM Variable Resource Requirement curve, but also provides a lesser level of reliability." PPL/PSEG comments at 23-24.

b. Commission Determination

80. The Commission finds that the Settlement Curve, although different from the Variable Resource Requirement Curve originally proposed by PJM in its August 31 filing, will provide for just and reasonable prices to meet PJM's reliability needs. Dr. Hobbs' analysis evaluated a variety of Variable Resource Requirement alternatives to determine how well they satisfied reliability and their overall costs to consumers.

81. Specifically, he analyzed the relationship between capacity prices and the offsetting revenues for energy and ancillary services, on the basis of the same assumptions that he used when evaluating PJM's original August 31 Curve. He found that under his modeling assumptions, the Settlement produced significantly better reliability than the current construct, at a much lower overall cost than the existing construct. For example, he found that in only 52.2 percent of the years will the existing capacity market meet or exceed PJM's reliability requirements, while the Settlement meets those requirements in 95.2 percent of the years. He further found the differences between the Settlement Curve and the August 31 Curve were "very small, compared to the gulf between" those two curves and the existing capacity market (*i.e.*, a completely vertical demand curve). The Commission agrees that Dr. Hobbs' analysis supports the view that the Settlement Curve will provide adequate reliability, at a just and reasonable price.

82. PPL/PSEG asserts that the Settlement Curve will be less effective than the Curve provided in PJM's August 31 proposal because it will produce prices that are not high enough, and urges the Commission to reinstate PJM's originally-proposed curve.[68] PPL/PSEG further assert that, since PJM stated in its August 31 proposal that the Variable Resource Requirement Curve contained in that proposal offered "the best combination of cost and reliability," it stands to reason that the Settlement Curve, which provides a different combination of cost and reliability, must be inferior to the August 31 Curve.[69] But the important comparison here is not whether the Settlement Curve is

[68] As described above, PPL/PSEG state that consumer payments for "scarcity plus Installed Capacity in dollars per kilowatt -year using the originally-filed Variable Resource Requirement Curve were expected to be $79.2," while "[t]he comparable cost using the Proposed Settlement Curve is $82.1," and that, while the original Variable Resource Requirement Curve that PJM supported was expected to produce results that would meet or exceed the Installed Reserve Margin 98.4 percent of the time, PJM only expects the Settlement Curve to do so 95.2 percent of the time. PPL/PSEG comments at 47, footnotes omitted.

[69] *Id*. at 51.

superior or inferior to the curve contained in the August 31 proposal. As discussed above, PJM demonstrated, and the Commission agrees, that the current capacity market will not continue to be just and reasonable because it does not attract adequate generation at a just and reasonable price. PJM and the Settling Parties in their Settlement have provided information showing that the Settlement Curve will attract sufficient generation to meet its capacity obligations at a just and reasonable price. Therefore, PJM and the Settling Parties have met the requirement of demonstrating that the Settlement is just and reasonable.

83. While PPL/PSEG submitted additional simulations purporting to show that the August 31 Curve is more likely to fulfill the objectives of RPM,[70] this assertion does not contradict the representations in the affidavits submitted by PJM witnesses Mr. Ott and Dr. Hobbs or make an affirmative showing that the Settlement is not just and reasonable. Any capacity market similar to either PJM's original August 31 proposal or the Settlement requires tradeoffs, including how much to trade off higher prices for energy (which would be brought about by lower capacity charges) versus higher capacity prices. We are satisfied that it is reasonable for the parties to have balanced lower initial capacity payments with a possibility of higher energy prices, and therefore find that the Settlement results in an acceptable capacity market with just and reasonable rates.

84. Finally, in addition to the evidence provided by PJM of the justness and reasonableness of the Settlement Curve, the Commission properly considered the fact that a significant majority of negotiating parties, representing a broad array of interests, were able to agree to it. As the D.C. Circuit found in evaluating the Commission's approval of a demand curve for the New York Independent System Operator:

> ELCON contends that the Commission failed to consider objections that the [capacity] charges under the Demand Curve were too high and that the slope of the Demand Curve was too gradual. . . . In fact, the Commission considered the objections raised by ELCON and determined based on the evidence offered by NYISO and its expert witness Dr. David B. Patton that the parameters of the . . . Demand Curve were "appropriate and reasonable." . . . . [The Commission also] considered the parameters to be reasonable, emphasizing the fact that the ICAP Demand Curve was initially

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[70] PPL/PSEG assert that the testimony of their experts, Falk and Shanker, demonstrates that the Settlement Curve will provide a "degraded" level of reliability compared to the level of reliability provided by the Variable Resource Requirement Curve contained in PJM's original August 31 filing. *Id*. at 25.

> proposed by the New York Public Service Commission and reflected a year of negotiations and discussions among [the state commission, the ISO, and capacity market participants].[71]

85. PPL/PSEG do not, however, demonstrate that the Settlement's Curve is *not* just and reasonable, which is the burden it would have to meet to justify rejecting PJM's proposal here. The Commission may find a rate, term or condition to be just and reasonable, upon a sufficient showing, even if other just and reasonable solutions exist.[72] Additionally, when choosing between competing just and reasonable options, the Commission has previously stated that it will accept the proposal of a utility if it is just and reasonable, rather than other competing just and reasonable proposals, even in the context of a filing under section 5 of the Natural Gas Act , the parallel provision to section 206 of the FPA..[73] Moreover, as PJM notes in its reply comments, PPL/PSEG's

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[71] *Id*. at 1241.

[72] *See, e.g. California Power Exchange Corporation*, 92 FERC ¶ 61,093 at 61,372 and n.10:

> We find that CalPX's proposal represents a reasonable methodology to track the ISO's recently-accepted ten-minute settlement mechanism. With respect to the first part of CalPX's proposal, PG&E has not demonstrated that the CalPX proposal, which sends the ISO's Imbalance Energy price signals to CalPX participants and, thus, discourages uninstructed deviations, is unreasonable. Accordingly, we will accept this aspect of CalPX's proposal. . . . We emphasize, however, that we do not necessarily consider this aspect of CalPX's proposal to be the only acceptable methodology for tracking the ISO's ten-minute settlement mechanism.

[73] *See ANR Pipeline Co.*, 110 FERC ¶ 61,069 at P 49(2005) ("while the Commission is acting here under section 5 in considering the protests to ANR's compliance filing, the Commission also takes into account the fact that the NGA delegates to the pipeline the primary initiative to propose the rates, terms, and conditions for its services under NGA section 4. If the rates, terms, and conditions proposed by the pipeline are just and reasonable, the Commission must accept them, regardless of whether other rates, terms, and conditions may be just and reasonable. Therefore, *to the extent ANR's proposed remedy is just and reasonable, the Commission will accept ANR's proposal even if other remedial provisions might also be just and reasonable*") (emphasis added).

"modeling analysis shows little difference between the expected performance of the two curves in terms of cost and reliability, but the Settlement Curve has the distinct advantage of being acceptable to the vast majority of the parties."[74]

86. In response to NRG's concern regarding volatility, as stated above, the Commission anticipates that when the price of capacity is set by a sloped rather than a vertical demand curve (regardless of the steepness of the slope), the prices will be less volatile than currently, when the difference between one megawatt above the Installed Reserve Margin and one megawatt below the Installed Reserve Margin can create significant price differentials. Moreover, under section 5.14(h) of the Tariff, the Settlement provides for mitigation in the event a supplier or load has market power.

5. New Entry Price Adjustment Provisions

a. Protesters' Arguments

87. Parties complain that the New Entry Price Adjustment provision results in both over and under compensation of capacity suppliers. The Maryland Office of the People's Counsel is concerned that the New Entry Price Adjustment provisions will result in prices that are too high for existing resources. It asserts that the New Entry Price Adjustment provision, in combination with the Settlement's Variable Resource Requirement Curve, will enable generators to keep prices high at all times, either because supply is tight, in which case the Variable Resource Requirement Curve will move prices up, or because of the price adjustments provided by the New Entry Price Adjustment mechanism.

88. PPL/PSEG take the opposite point of view. They favor a proposal that would allow new entrants to receive their first year offer for five years, and permit that offer to set the market clearing price. In their view, the benefits offered by the New Entry Price Adjustment provision will be too speculative.

b. Commission Determination

89. The New Entry Price Adjustment reflects the recognition of the settling parties that efficient entry in a small Locational Delivery Area could create a precipitous decline in market clearing prices after the initial delivery year (which would affect both new entrants and existing generators), especially if the existing mitigation rules were applied. The New Entry Price Adjustment sought to reduce these risks by making certain revenue assurances to the new entrant, and to dissuade existing resources from retiring

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[74] PJM reply comments at 17.

prematurely. Under the New Entry Price Adjustment provision, section 5.14 (c) of the Tariff enables a new entrant, under certain conditions, to receive certain revenue assurances for two years following the initial delivery year. As long as the entrant submits a sell offer equal to the lesser of its initial accepted offer or 90 percent of the then-current Net Cost of New Entry, it will be entitled to receive the higher of its initial offer or the market clearing price for a two-year period in addition to the market clearing price in its initial delivery year. If its sell offer exceeds the market clearing price, it will receive a make whole payment. Market clearing prices in the Locational Delivery Area will reflect the lesser of the sell offer or 90 percent of Net Cost of New Entry.

90. PPL/PSEG considers this compensation insufficient, arguing instead for a New Entry Price Adjustment provision under which new entrants would have received their initial bid for the first five years of operation, without fear of mitigation, and that bid could set the clearing price for all generators, as was originally proposed in the August 31 filing. Maryland People's Counsel, on the other hand, argues that the market clearing price for the two subsequent years should not reflect the lesser of the entrant's initial sell offer or 90 percent of Net Cost of New Entry. Rather, market clearing prices should not reflect more than the avoidable cost of a new entrant, although the entrant may receive revenue guarantees for an initial three-year period.

91. We find the judgments made in the development of the Settlement's New Entry Price Adjustment to be reasonable. We agree they support efficient entry, with additional revenue guarantees for the new entrant. We disagree with the position of the Maryland People's Counsel. New entrants ultimately become existing generators. Under the Maryland People's Counsel position, capacity prices received by existing generators in small Locational Delivery Areas would likely fall far below the Cost of New Entry in most years, while approximating the Cost of New Entry (or the bid of a new entrant) only in the years when a new entrant's capacity is accepted in the auction. If capacity prices approximate the Cost of New Entry in some years and fall significantly below the Cost of New Entry in the other years, the average capacity price over time would be less than the Cost of New Entry. Such a result would not encourage new entry, since a potential new entrant would not expect to receive revenues over time that covered its fixed costs. By contrast, the Settlement's New Entry Price Adjustment provision provides that the capacity prices will be relatively stable at levels near the Cost of New Entry, as long as new entry is needed at least every three years. Thus, the New Entry Price Adjustment provision encourages new entry by ensuring that new entrants do not see a precipitous decline in prices after entry, and it also encourages existing generators not to retire prematurely. We do not favor the alternative recommended by Maryland People's Counsel witness, Mr. Wallach. As we noted earlier, his alternative (which is similar to a Reliability Must Run contract) treats new and existing capacity differently, even though they provide the same service, by relying on side payments to individual new units.

92. The Commission concludes that the New Entry Price Adjustment provision as written provides a just and reasonable result. It balances the need to ensure that efficient entry in small Locational Delivery Areas is not unduly discouraged, and that all suppliers receive a market clearing price that reasonably reflects value. In the particular case of a small Locational Delivery Area, the efficient scale of entry could produce a saw-toothed pattern of prices that could discourage entry and prompt a volatile revenue stream for existing resources, thereby creating greater risk and higher costs for consumers. As a result, we find it reasonable to apply the new entry price as the market clearing price for all resources.

93. The New Entry Price Adjustment is a middle ground between the positions of the two objecting parties –for a two year period, prices are higher than those the Maryland People's Counsel would recommend, but not as high as PPL/PSEG propose. Both support revenue assurances for the new entrant, although PPL/PSEG believes that support should be extended to five years instead of three. We find the judgments made in the development of the Settlement's New Entry Price Adjustment to be reasonable. We agree they support efficient entry with additional revenue guarantees for the new entrant. Further, we agree they appropriately set prices for all resources in the Locational Delivery Area by using offers from the new entrant to reflect the value of capacity.

6. Market Power and Mitigation-Related Issues

a. Protesters' Arguments

94. Several parties opposing the settlement raise a number of objections to the various mitigation rules. BP Energy expresses no confidence in the overall RPM market structure to provide a competitive outcome and argues that any capacity market that ultimately pays a uniform market clearing price is unfair to consumers. It asserts that a supplier's revenue, not just its offer, must be mitigated. Furthermore, BP Energy claims that PJM does not have an independent Market Monitor and the PJM Market Monitor cannot be relied upon to assure just and reasonable rates. In its view, locationally differentiated capacity prices are an indication of inappropriate price discrimination, not an appropriate reflection of cost variations in different Locational Delivery Areas.

95. PPL/PSEG offer testimony from various expert witnesses to argue that many features of the mitigation proposal are unwarranted and will undermine investment incentives and reliability. They are particularly troubled by the various provisions that apply to new entry – the minimum offer price rule, the New Entry Price Adjustment, and the potential rejection of offers from new entrants. PPL/PSEG argue that overall these measures create considerable risk for investors in new generation capacity. They also

object to the various approaches for defining default bids for existing resources, especially the option that permits the PJM Market Monitor to define resource classes and corresponding prices and the options that are only available to signatories.

96. Coral Power and JP Morgan complain that the mitigation rules are opaque, contain elements of subjectivity, and create a high degree of uncertainty. In particular, Coral Power believes that offer capping does not provide an adequate means to account for risk. JP Morgan also argues that the Settlement's market mitigation provisions will inhibit new entry because they are insufficiently transparent.

97. BP Energy expresses concern that PJM's mitigation measures will not succeed in maintaining just and reasonable prices, especially during the first year of the transition to the new structure, during which new entry will not be able to bring down prices, and so all current generation in congested areas is likely to have and exercise market power. BP Energy points out that, even within the Settlement structure, if generators know one another's costs (as is the case here, since the generation sector was regulated until recently, so that all costs were made public), they can easily determine what units to retire in order to raise the clearing price. Furthermore, BP Energy argues in its reply brief that despite the use of the three-pivotal-supplier rule, once the three pivotal suppliers in an area are capped, the remaining generators can still exercise market power to raise prices to unjust and unreasonable levels.

98. PPL/PSEG further assert that new entry faces the possible suppression of prices through buyer actions, such as the decision of states to mandate new reliability projects that could reduce clearing prices to zero. PPL/PSEG believes that the Settlement's Minimum Offer Price Rule provision does not go far enough to address this problem.

99. Parties also raised issues with regard to the Capital Recovery Factors that parties can use to raise their default bids (which come into play if their initial bids are mitigated) to recover fixed-cost investment that they may need to incur to make sure the resource is available. Mittal Steel claims that the use of these Capital Recovery Factors will put excessive upward pressure on the prices in the two Locational Delivery Areas where Mittal Steel's load is located. Mittal Steel also objects to an assumption relating to one such Capital Recovery Factor, Mandatory Capital Expenditures, that a plant only has a useful life of four years. PPL/PSEG claims that it is inappropriate to limit Mandatory Capital Expenditure treatment to coal plants that were built prior to 1957.

b. Commission Determination

100. With the exception of the provisions that discriminate between signatories and non-signatories (as discussed below), provisions relating to Mandatory Capital

Expenditure treatment, and the provisions that allow for Market Monitor discretion, we find that the Settlement's provisions for market power monitoring and mitigation are reasonable.

101. The purpose of the mitigation provisions is to address potential elements of market power that may possibly occur. There are a number of market design features within RPM that should operate to limit the potential for the exercise of market power. The three year forward market permits competitive entry in the event that existing generators are seeking to raise prices above competitive levels. The Variable Resource Requirement Curve itself establishes certain price caps (such as one and one half times Cost of New Entry) that also militate against any effort to raise price. However, there may still be the potential for the exercise of market power, particularly in small, constrained Locational Delivery Areas, and we find that the provisions of the Settlement reasonably address such eventualities. But it should be recognized that it may be that none of these provisions may come into play or may come into play relatively infrequently. The market design features, in combination with the fact that mitigation is primarily targeted to existing capacity resources in constrained Locational Delivery Areas, support our conclusion that the mitigation provisions are reasonable. However, as discussed below, because the Settlement's mitigation provisions allow for some exercise of discretion by the PJM Market Monitor (for example, the monitor is allowed to reject certain bids by new entrants), we will require the tariff to allow market participants affected by the exercise of that discretion to appeal that action to the Commission.

102. We will address below specific issues raised by the contesting parties.

i. Attempts by Buyer to Depress Prices

103. Section 5.14(h) of the Tariff addresses the concern that net buyers might have an incentive to depress market clearing prices by offering some self-supply at less than a competitive level. Subject to certain exemptions, if the supply offer of a net buyer falls below certain specified levels, and if its net purchases exceed certain specified levels, and if it does not convince the PJM Market Monitor that the offer is cost-justified, the Market Monitor may establish an alternative higher bid. The alternative bid would equal 90 percent of the Market Monitor's estimate of the bidder's Net Asset Class Cost of New Entry (or, if this cost is not available, 80 percent of the Net Cost of New Entry for the Reference Resource). If an alternative bid is warranted, a sensitivity analysis is performed to measure the effect of the alternative bids on market clearing prices, and unless the effect on the market clearing price is above certain critical levels, the Minimum Offer Price Rule will not take effect. PPL/PSEG agrees that there is a

necessity for a Minimum Offer Price Rule, but challenges the implementation of that rule in the Settlement, because they believe the Minimum Offer Price Rule does not go far enough due to the multiple exceptions.[75]

104. The Commission finds the Minimum Offer Price Rule a reasonable method of assuring that net buyers do not exercise monopsony power by seeking to lower prices through self supply. The exception to which PPL/PSEG primarily objects – namely, reliability projects built under state mandate – is reasonable because it enables states to meet their responsibilities to ensure local reliability.

ii. <u>Market Power During First Year of Transition</u>

105. BP Energy claims that PJM's mitigation measures will not produce just and reasonable prices, because all generation in congested areas will be able to exercise market power during the first year of the transition when new entry cannot take place. The Commission finds no merit in BP Energy's position. During the first transition year, there will be only four Locational Delivery Areas, which will increase the number of potential suppliers and limit their ability to exercise market power. Moreover, mitigation rules apply in the first year of the transition to the RPM program, and so will also serve to mitigate market power. With regard to BP Energy's specific claim that generators may engage in strategic decisions as to which units to retire, such actions could constitute physical withholding within the definition provided in the Settlement, and would then be mitigated under section 6.[76] Contrary to BP Energy’s understanding,[77] the Market Monitor is not limited to capping only three units; rather, that test will result in capping all pivotal units.

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[75] Minimum offer prices would not apply to base load resources that require more than three years to develop, hydroelectric facilities, any upgrade or addition to an existing Generation Capacity Resource, or any planned resource being developed in response to a state regulatory or legislative mandate to resolve a projected capacity shortfall in the delivery year affecting that state, *i.e.*, such planned resources have a zero Net Asset Class Cost of New Entry.

[76] PJM Tariff Revisions, Attachment C to Settlement (Tariff), proposed section 6, at Original Sheet Nos. 608-609.

[77] BP Energy comments at 19.

iii. Mandatory Capital Expenditure Treatment

106. Three options with alternative Capital Recovery Factors are available for older existing capacity resources that choose an avoidable cost default bid to recover their investment costs, including the Mandatory Capital Expenditure option. This option allows these units, when their bids are mitigated, to adjust their default bids to allow them to recover investment costs required to comply with government-mandated requirements (such as, for example, environmental regulations). To qualify for this provision, the resource must be either: (1) a coal, oil or gas-fired resource that began commercial operation at least 15 years before the relevant delivery year and meet certain investment criteria; or (2) a coal-fired unit that has been in operation for 50 years by the effective date of the Agreement. Under the second provision, qualifying signatories may recover their project investment over a four year period.

107. PPL/PSEG contends that it is improper to limit Mandatory Capital Expenditure treatment to coal plants constructed before 1957. PSEG/PPL argues that all coal units that operate for 50 years should be eligible for this benefit once they reach 50 years of operation, or the Commission should establish a reasonable cut-off date for this provision. Mittal Steel states that, because many of the plants eligible for Mandatory Capital Expenditure treatment are located in the Locational Delivery Areas where Mittal Steel's loads are also located, this provision may raise the price to buyers of capacity from units that elect that provision.

108. The Commission finds that the Mandatory Capital Expenditure provision, establishing a fixed cutoff date (50 years prior to the effective date of the Settlement), is not reasonable as proposed. We accept PPL/PSEG's argument that this treatment should be extended to additional coal fired plants as they reach 50 years of commercial operation. In contrast to the fixed cut-off, other cost recovery provisions, such as the 40 year plus alternative option,[78] use a rolling cut-off date for all similarly situated plants, we will require that a similar rolling cut-off date be applied here. Therefore, we will require the Tariff to be modified to delete the requirement that the plant’s commercial operation must have begun at least 50 years prior to the effective date of the Settlement, and add a requirement that the eligible unit began commercial operation at least 50 years before the conduct of the relevant Base Residual Auction effective date of the capacity year. As to the concern raised by Mittal Steel, the Commission will not reject this provision simply because it raises prices to some load; rather, we view it as a reasonable method of ensuring that adequate capacity is incented to remain operational by allowing default bids to reflect capital investment cost recovery.

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[78] *See* Tariff, proposed section 6.8, at Original Sheet No. 616.

7. <u>Discriminatory Treatment of Non-Signatories</u>

a. <u>Protesters' Arguments</u>

109. The Settlement includes certain provisions that are available only for signatories to the agreement. First, preferential treatment is available to capacity sellers that are signatories and own or control no more than 10,000 megawatts of Unforced Capacity in the PJM region. If such a capacity seller submits an offer in an auction for an unconstrained part of the PJM region and its offer is subject to market power mitigation, then that seller is eligible to have bids for up to 3000 megawatts of the seller's offered Unforced Capacity increased by up to $10/MW-day for the 2007-2008 or 2008-2009 delivery years, and up to $7.50/MW-day for the 2009-2010 delivery year. Similarly-situated non-signatories are not eligible under the Settlement for this bid adder.

110. Secondly, the Settlement makes the Fixed Resource Requirement alternative available to single customer Load Serving Entities that are signatories to the agreement, but not to those who file opposing comments to the Settlement. Finally, the Settlement also provides that Mandatory Capital Expenditure cost recovery treatment (discussed above) is only available for units owned by parties who were signatories to the Settlement.

111. The Maryland People's Counsel protests the bid adder provision as being discriminatory, especially because this provision is targeted to a situation where bids are mitigated to protect customers because suppliers have market power. They argue that this provision will only allow signatories to exercise market power. In its reply comments, PJM responds that the bid adder provision will not allow sellers to exercise market power, because the bid adder will be available only to sellers located in areas that, while they may fail the market structure screen, are nevertheless large areas with a relatively large number of suppliers and where new entry is not needed, and thus where prices are expected to remain low. PJM notes that the Settlement permits sellers to seek to justify to the Market Monitor additional costs in the avoidable cost bid cap. PSEG/PPL also protests these preferential provisions as being discriminatory, arguing that the bid adder provision over-mitigates non-signatories. PSEG/PPL also contends that the provisions giving preferential treatment to signatories discriminates against new market participants, who by definition are not signatories to the Settlement.

112. In reply comments, PHI responds to criticisms of the bid adder by stating that transitional bid adders for suppliers in unconstrained Locational Delivery Areas are required to support system reliability. PHI asserts that the provision, which would be in effect for only three years, does not apply to sellers that have market power. PHI believes that this actual commitment by unit specific generation, backed by severe penalties, provides a significant reliability benefit to customers and imposes new risks on

generators. PHI contends the transitional bid adders are recognition of this additional risk and ensure that generation in unconstrained Locational Delivery Areas will continue to be available to support system reliability.[79] Capacity Buyers and Suppliers agree that this market tool is intended to ease the transition by providing a small safe harbor adder to allow offers to reflect the additional and potentially unknown operational risks of committing a resource on a forward-looking basis.[80]

b. Commission Determination

113. We find all three of these provisions giving preferential treatment to signatories to be unduly preferential and discriminatory. We therefore will require PJM to submit, within 30 days of the date of this order, a compliance filing that (a) permits all sellers to receive the bid adder when they qualify for it, regardless of whether the seller was a signatory to the Settlement, (b) makes Mandatory Capital Expenditure treatment available to all qualified units regardless of their signatory status, and (c) makes the Fixed Resource Requirement alternative available to qualifying single customer Load Serving Entities whether or not they were signatories. We agree with PJM that the bid adder will not raise significant market power concerns because it is available only to suppliers located in large areas with a large number of suppliers, and that the bid adder is a reasonable and limited safe harbor increment to sellers' avoidable-cost bid caps to account for hard-to-quantify costs during the transition period. The bid adder will serve as an incentive to existing generators to remain in service during the limited three-year transition period, after which it is more likely that new entry will be available.

8. Market Monitor Discretion

114. Under the Settlement, there are objective criteria that determine when bids are potentially subject to mitigation. The Settlement provides that in these cases, the PJM Market Monitor can allow bids that fail these objective screens to go forward.[81] The

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[79] PHI reply comments at 12.

[80] Capacity Buyers and Suppliers reply comments at 24.

[81] Under section 5.14(h) (the Minimum Offer Price Rule), if bids fall below certain objective criteria that would otherwise require rejection of the bid, the Market Monitor first gives the seller an opportunity to cost-justify its bid. If, in the Market Monitor's judgment, the seller does not provide satisfactory justification, the Market Monitor replaces the bid with a price determined by reference to objective criteria in the Tariff. Tariff, proposed section 5.14(h), at Original Sheet Nos. 600-603

(continued…)

Settlement also provides that generators can obtain default bids by submitting financial data regarding their costs to PJM. For generators that do not want to provide such information, the Settlement provides that the Market Monitor can develop a default bid.[82] PPL/PSEG asserts that the discretion that the Market Monitor may exercise in this process could, if misapplied, distort the market price and market signals.[83] PJM states in response that the only discretion afforded the Market Monitor is to consider specific enumerated types of evidence (Cost of New Entry values, new entry offers, barriers to entry) under clearly-specified circumstances, and the Commission has approved other provisions that allow a Market Monitor to review new entry bids and determine if they are appropriately priced and reflect competitive conditions.[84]

115. The Commission's regulations governing Market Monitors require that the regional transmission organization provide for objective monitoring of the markets it operates or administers.[85] We are concerned that the Market Monitor may have excessive discretion as proposed in the Settlement. At the same time, the Commission is concerned that it could be a significant undertaking for PJM to establish objective criteria

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Under section 6.5(a) (ii) (mitigation of new entrants that are not net buyers), if a new entrant's bid fails certain structural tests, the Market Monitor compares the bids of each such potential new entrant with those in other Locational Delivery Areas and with the Cost of New Entry, and evaluates barriers to entry; based on this analysis, the Market Monitor uses its judgment to determine whether the bid of the new entrant is non-competitive and should be rejected Tariff Revisions, proposed section 6.5(a)(ii), at Original Sheet Nos. 607-608.

[82] Section 6.7 (c) allows certain generators that prefer not to submit unit-specific cost information needed to support a cost-based bid cap to request the monitor to establish a default bid. Following such a request, section 6.7 (c) gives the monitor discretion, following stakeholder consultation, to develop alternative default bids for these generators. *See* Tariff Revisions, proposed section 6.7, at Original Sheet Nos. 609-612. PJM has already begun the process of stakeholder consultations leading to development of such alternative default bids, *see* http://www.pjm.com/markets/market-monitor/downloads/mmu-presentations/20061108-rpm-workshop-avoidable-cost-rate-dev.pdf.

[83] PPL/PSEG comments at 66-67.

[84] PJM reply comments at 36, citing *Devon Power* at P 114.

[85] 18 C.F.R § 35.34(k)(6) (2006).

for the Market Monitor to follow – possibly to the point of delaying RPM market implementation. Accordingly, the Commission accepts this tariff language, but will require PJM to include a provision in the tariff that will allow rapid review by the Commission of any Market Monitor decisions with respect to the matters where the Market Monitor has discretion. Specifically, within seven days after the deadline for receiving bids for any auction, PJM is required to file with the Commission a report of any instance wherein the Market Monitor exercised its discretion in any of the three areas described above. The report must document the instances where the Market Monitor exercised discretion, the Market Monitor's ultimate conclusion in those situations, the information the Market Monitor considered in reaching its conclusion and a detailed explanation of how the Market Monitor exercised its discretion. Parties objecting to any use of discretion by the Market Monitor as documented in the report shall then have seven days from the date PJM files its report to file objections to the results. Parties challenging the determination must do more than merely allege that the market monitor erred in a bid determination; they should provide support for their allegation that the market monitor overlooked or failed to evaluate relevant evidence in determining whether to permit a bid to go forward. The Commission shall issue its decisions regarding the Market Monitor decisions promptly, but no later than 60 days after PJM files its report. The final auction results shall reflect any modifications to the Market Monitor's decisions required by the Commission. Thus, in the near-term, the Commission will ensure that Market Monitor discretion, if any, produces a just and reasonable result. We will require PJM to make a compliance filing within 30 days of the date of this order that provides for the review process of any exercise by the Market Monitor of its discretion under these provisions. In addition, to ensure that the issue is rectified on a long-term basis, we will require PJM to file within nine months of the date of this order, objective factual criteria to be used by the Market Monitor in reviewing bids under these three sections of the Tariff. Such objective criteria would replace the criteria included in the Settlement and the near-term review procedures and would become effective no sooner than April 1, 2008.

9. Additional Issues

a. Energy and Ancillary Services Revenue Offset

i. Protesters' Arguments

116. Under the Settlement, the net Cost of New Entry is determined by subtracting the net revenues earned from the sale of energy and ancillary services from the cost of new entry for new capacity providers. JP Morgan argues that using historic fuel prices and LMPs to determine this Net Energy and Ancillary Services Revenue offset is unreasonable. Since the Base Residual Auction would occur three years before the delivery year and the offset would include prices observed up to six years before the

auction, JP Morgan states, there would be a nine year lag in prices. In JP Morgan's view, this lag would virtually assure that the net revenue offset would not reflect prevailing market prices in the delivery year. JP Morgan claims that energy prices in the Potomac Electric Power Company (PEPCO) territory were $9.80 higher than the Western Hub last year, compared with a price difference of $4.23 for the preceding six years. JP Morgan concludes that the resulting understated offset would result in excessively high capacity prices paid to generators. JP Morgan urges the Commission to replace the historical prices with values that are reflective of current market conditions in the delivery year.

117. PJM disagrees with JP Morgan. PJM notes that the Energy and Ancillary Services offset is based on six years of data only for Base Residual Auctions for the first three delivery years; the offset for Base Residual Auctions for subsequent delivery years would be based on the three most recent years. In PJM's view, the offset will be based on more recent data and therefore would address JP Morgan's primary concern. PJM argues that JP Morgan's recommendation to use price data from the single most recent year is based on the flawed assumption that prices in the delivery year three years forward will be most like the single recent year. Because of the year-to-year volatility in energy and fuel prices, PJM concludes, an average smoothes out the year-to-year price differences and will more likely be a better predictor of revenues three years forward.

ii. Commission Determination

118. We find that the settlement's proposed method for calculating the net Energy and Ancillary Services offset is reasonable when considered within the overall context of the other settlement provisions. We agree with PJM that energy and fuel prices can change significantly – both upward and downward – from year to year, and that the better predictor of prices in any one delivery year, three years forward, is likely to be a multi-year average price rather than the average price in any single year. Moreover, while JP Morgan expresses concern that historic energy and fuel prices will always understate revenues in the present, evidence in the record suggests otherwise.

119. We agree with PJM that JP Morgan has not supported its assumption that prices in the delivery year three years forward will be most similar to prices in the single most recent year of data. As Mr. Seth G. Parker states in his October 18, 2005 affidavit on behalf of several generating companies, over the six-year period of 1999-2005, gas prices increased faster than electricity prices,[86] so that net energy revenues for gas-fired peakers (the basis for determining Cost of New Entry), in the early years of that period were

[86] Affidavit of Seth G. Parker, attachment to Edison Mission Energy, *et al.*, comments filed on October 18, 2005 (Parker Affidavit) at 16-18.

higher than in the later years. PJM also cited to statements by its witnesses Mr. Ott and Mr. Bowring that, given the year-to-year volatility in both energy prices and fuel prices, an average of multiple recent years is more likely to be a good predictor of revenues three years forward.[87] Thus, we find it reasonable to use a multi-year average as a proxy for Energy and Ancillary Services Revenues.

b. Adjustments to Cost of New Entry via Empirical Cost of New Entry

i. Protesters' Arguments

120. Over time, the cost of new entry will change. The Settlement holds Cost of New Entry fixed for four years, and then provides for adjustments to Cost of New Entry to reflect empirical information from actual capacity market activity when there is a "net demand for new resources" over three consecutive delivery years. PPL/PSEG and their consultant, Dr. Shanker, argue that the settlement's Cost of New Entry adjustment proposal has the following three flaws. First, the proposal would substantially delay changes needed to correct inaccurate Cost of New Entry values, for several reasons. The initial gross Cost of New Entry value is frozen for four years, thereby substantially delaying the ability to correct an inaccurate initial Cost of New Entry value or else requiring PJM to make a section 205 filing to correct the inaccuracy. Further delay may occur because an adjustment occurs only if there is a net demand for new resources, which is defined to occur only if, over a three-year period, there is a greater generation deficiency in year three than in year one. As a result, in this view, even if a Locational Delivery Area is deficient, no adjustment to Cost of New Entry would be made if the deficiency is declining over time. In addition, they argue, any Cost of New Entry adjustment is arbitrarily capped by the lesser of 10 percent of the previously estimated Cost of New Entry or half the difference between the current Cost of New Entry and the empirical Cost of New Entry. The second flaw is that the settlement's proposal has a downward bias because the Market Monitor is allowed to reject bids that are perceived as above Cost of New Entry, even if market participants face truly higher new entry costs or reasonably seek premiums reflective of the market design and market intervention risks. The third flaw is that the values used under the settlement are a direct output of the slope of the demand curve, and have nothing to do with the actual cost of new entry.

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[87] PJM reply comments at 21-22, *citing* Supplemental Affidavit of Andrew L. Ott on Paper Hearing Issues, attachment to PJM Brief on Paper hearing Issues (Ott Supplemental Affidavit) at 6; Ott Affidavit at 15; Bowring Affidavit at 4.

121. PPL/PSEG and Dr. Shanker argue that the best way to adjust the Cost of New Entry is to look at the actual offers of market participants to sell capacity from new generation, because new competitive participants will bid what they think is necessary to cover their costs and exposure to risks in the market. In Dr. Shanker's view, the Market Monitor should review and screen new entry bids to assure that offers are not attempting to bias the evaluation of new bids, and bids deemed legitimately competitive would be eligible to be used to establish the new Cost of New Entry.

122. In its reply comments, PJM disagrees with PPL/PSEG and defends the settlement's proposal to adjust the Cost of New Entry by relying on clearing prices rather than by relying on all new entry offers, as recommended by PPL/PSEG. PJM argues that the PPL/PSEG approach would require an administrative mechanism to the screen outliers and to determine how to translate new entry offers into an adjustment to the Cost of New Entry, while the Settlement approach uses the auction itself as the screen. PJM also contends that the Settlement's proposals for a four-year transition period before adjusting the initial Cost of New Entry value view Empirical Cost of New Entry and the 10 percent limit on each year's Cost of New Entry adjustment are reasonable, because they dampen swings in the Cost of New Entry and make it more predictable. Moreover, in PJM's view, the initial Cost of New Entry value is well-supported by the Technical Conference record, is just and reasonable, and thus is unlikely to require significant adjustment in the near term. PJM states that as an added remedy in the event that the Cost of New Entry value must be adjusted more rapidly than provided for under the empirical Cost of New Entry measure, the settlement expressly preserves PJM's rights to file under FPA section 205 to make changes in its tariff, including changes to the Cost of New Entry.

ii. <u>Commission Determination</u>

123. We find that the settlement's proposals for adjusting the Cost of New Entry value are reasonable within the context of the overall settlement. We agree with PJM that relying on cleared prices in instances when new entry is actually needed is a better way to adjust Cost of New Entry than PPL/PSEG's proposal to rely on all offers by new entrants. Not all offers by new entrants may necessarily reflect a reasonable net cost of new entry, especially higher-cost offers that lose out to lower-cost offers in an auction. Cost of New Entry should be based only on the cost of efficient entry. Offers by new entrants that are accepted in the auction have passed a market test, and thus are likely to reflect the actual cost of new entry. Moreover, PPL/PSEG's proposal to link Cost of New Entry adjustments to offers (whether or not they are accepted) could encourage some participants to submit inflated offers (which the participants do not expect to be accepted) merely to increase the Cost of New Entry value. We also conclude that modest delays in fully adjusting Cost of New Entry under the settlement are not unreasonable as a means

of providing stability and predictability to the Variable Resource Requirement curves. Moreover, if experience shows that the Cost of New Entry value is substantially inaccurate, either higher or lower than actual costs, the settlement provides that PJM has the explicit right to file to change the Cost of New Entry value.

c. Charges and Credits for Exports

i. Protesters' Arguments

124. The Long Island Power Authority and LIPA (collectively, LIPA) contend that the Settlement does not provide an adequate description of how firm exports from or across Locational Delivery Areas would be treated under RPM, noting that the filing does not describe how the RPM market and forward auction construct will function. However, LIPA states that if PJM separately files language that resolves LIPA's concerns, it will withdraw its opposition to the Settlement. LIPA therefore conditionally opposes the Settlement.[88]

125. LIPA protests PJM's placeholder in the Settlement that promises a separate filing "to address appropriate charges and credits as necessary to reflect locational price differences in capacity exported from the PJM region"[89] as inadequate. LIPA states that it has purchased Firm Transmission Withdrawal Rights from PJM via lines owned by Neptune Regional Transmission System, LLC (Neptune) and plans on utilizing them to possibly contract with PJM capacity that is outside of the Locational Delivery Area within which Neptune interconnects with the PJM system. LIPA therefore expects to be liable for charges and eligible for credits in the same manner that internal loads, under RPM, pay charges and are allocated credits based on their share of Capacity Transfer Rights between the Locational Delivery Area in which the load is located and neighboring Locational Delivery Areas. LIPA believes credits are appropriate particularly if LIPA must bear, through its association with merchant transmission, cost allocations for regional transmission expansion planning protocol upgrades, irrespective of whether it takes network or point to point service.[90]

126. LIPA requests that the Commission require PJM to propose a defined set of rules and procedures that provide for just and reasonable treatment of capacity exports which

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LIPA comments at 1, 4 and 6.

[89] Settlement, section II P. 7 at 44.

[90] LIPA comments at 4, 5.

would be fully integrated into the RPM construct. LIPA further requests that such rules recognize the specific attributes that exist for capacity exports using Firm Transmission Withdrawal Rights, and that exports are treated consistently with PJM's modeling of transactions in reliability and transmission capacity assessments, as equivalent to internal native load. LIPA argues that in granting this requirement, the Commission would provide a level playing field for all customers, including merchant transmission.[91]

127. PJM replies that the Settlement requires PJM to make a filing to address appropriate charges and credits to reflect locational price differences in exported capacity separately. PJM notes that it intends to submit such a filing seeking an effective date of June 1, 2007 for tariff changes reflecting the gap that LIPA has identified. PJM believes, however, that LIPA's concerns regarding the content of such a filing are premature and should be addressed at the time PJM makes the separate filing.[92]

ii. Commission Determination

128. We are satisfied that PJM has agreed in the Settlement to address LIPA's concerns in a separate filing for which it will seek an effective date that coincides with the targeted implementation of RPM. We agree with PJM that it is premature at this time to address the contents of such a filing. LIPA will have a full opportunity to comment on the

content of PJM's filing once it has been made. Moreover, the charges to which LIPA refers are currently the subject of an ongoing proceeding before the Commission. Any subsequent filings will have to comply with the outcome of that proceeding.[93]

d. RPM and Demand Response

i. Protesters' Arguments

129. The New Jersey Commission argues that the Settlement offers no incentive to enhance energy efficiency, which it states has been demonstrated to be the most cost-effective means of reducing peak demand.[94] The New Jersey Commission believes that

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[91] *Id*. at 6.

[92] PJM reply comments at 38.

[93] *See PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,058 (2006).

[94] New Jersey Commission states that New Jersey's load grows by about 400 MW per year, and that siting difficulties prevent this load from being served completely by

(continued…)

while the Settlement commits the parties to establishing additional processes for pursuing and supporting demand response and incorporating energy efficiency applications,[95] it still does not directly address these issues and, instead, assumes that additional capacity payments will fix the reliability problem across the PJM region.[96] To improve RPM's energy efficiency and demand response provisions, the New Jersey Commission requests that the Settlement be modified to provide that PJM's efforts should begin without delay and should include non-settling parties.[97]

130. In its reply comments, PHI argues that RPM, as implemented by the Settlement, incorporates a significant demand response initiative. PHI points out that it eliminates the current economic difference between generators and load management so that both have an equal opportunity to compete as a capacity resource. PHI argues that demand response participation in the auctions not only places demand response on a level playing field with capacity as an alternative for responding to reliability issues but also should reduce the auction clearing prices. Under RPM, as initially proposed by PJM, demand responsive load could choose to be either an Interruptible Load for Reliability provider or a Demand Resource. As an Interruptible Load for Reliability provider, a load will offer to PJM up to ten six-hour interruptions per year and will receive a credit against its RPM reliability charge. Alternatively, load can choose to offer this same level of interruption capability into one of the RPM auctions as a capacity resource just like any capacity resource. PHI states that Interruptible Loads for Reliability and Demand Resources will receive either compensation or credit for the base reliability charge and the locational price adder. According to PHI, these provisions, which were not modified by the Settlement, provide a significant improvement over current PJM procedures, and are an improvement over similar procedures in place at several other regional transmission organizations.

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power imports. New Jersey Commission hopes to reduce the level of load growth through energy efficiency and demand response initiatives. New Jersey Commission comments at 3

[95] Settlement, section II.P.4 at 43.

[96] New Jersey Commission comments at 3.

[97] *Id*. at 4.

ii. Commission Determination

131. In broad terms, the Settlement does promote energy efficiency, in that greater price awareness is likely to incent users to (a) use energy more efficiently, and (b) become aware that they might benefit from participation in a demand response program. Additionally, demand responders can participate in the RPM capacity market by submitting bids to reduce demand. Further, demand response is eligible to set the market clearing price. While we support the inclusion of demand response in RPM, there are several aspects of this proposal that require clarification.

132. Schedule 6 of the PJM Reliability Assurance Agreement, refiled as part of the Settlement, requires that demand resources must interrupt for at least six hours during eight peak hours to be eligible for payments under RPM. The Commission recognizes that this six-hour minimum requirement was a provision of the Reliability Assurance Agreement before PJM developed its RPM proposal. However, under the Settlement, demand response will play a more important role in addressing capacity needs than was previously the case. It is not clear that the prior six hour requirement should be simply transferred to the capacity market, since such a requirement may not be necessary to achieve the goals of the capacity market and may unnecessarily preclude demand resources from participating in the capacity market. We will, therefore, require that as PJM monitors and assesses the effectiveness of RPM, it file a report within nine months of the date of this order that examines whether, in practice, the six hour requirement is necessary for participation in the capacity market, and whether this requirement has precluded demand resources or certain types of demand resources from participating in the market.

133. In section II.P of the Settlement, PJM committed to (a) establish an additional process within the PJM region for pursuing and supporting demand response and incorporating energy efficiency applications, and (b) establishing a forum for discussions dedicated to increasing coordination among PJM, state siting authorities, regulatory commissions, and PJM stakeholders to identify, evaluate and rectify barriers to entry of demand response. Within nine months of the issuance of this order, we direct PJM to report to the Commission on the status of the additional process on demand response and energy efficiency, and the results and conclusions from the forum for rectifying barriers to entry of demand response.

134. Further, the PJM Manuals and the Reliability Assurance Agreement set criteria and rules for demand response and Interruptible Load for Reliability. Because the rules for demand response participation in RPM are an integral part of the new capacity construct, we will require that PJM incorporate the eight criteria in Schedule 6 of the Reliability Assurance Agreement and the rules in the PJM Manuals associated with standards and procedures for demonstration that a resource has the capability to provide a

reduction in demand, the calculation of the DR Factor (Demand Response Factor) and Unforced Capacity Value of a demand resource, and rules and procedures for verifying the performance of demand resources in the PJM Tariff. We therefore approve the Settlement subject to PJM submitting, within 60 days of the issuance of this order, revisions placing the rules and criteria for demand response participation within the capacity market in the PJM Tariff. If PJM cannot file these changes within this timeframe, PJM should notify the Commission with an explanation of why they cannot comply with this requirement.

e. Disincentives to New Construction

135. The New Jersey Rate Counsel further asserts that the Settlement will not provide incentives to construct new generation because existing generators will prevent new entry, and will refrain from expanding their own capacity in order to maintain or create shortages, leading to high capacity prices. According to the New Jersey Rate Counsel, many Load Serving Entities that are wholesale buyers are also affiliated with existing generators, so they have no incentive to change this market strategy.

136. If such anticompetitive conduct occurs, the New Jersey Rate Counsel or any can refer such activity to the PJM Market Monitor or the Commission for action. However, the New Jersey Rate Counsel has presented no specific evidence to support this allegation. The mitigation proposals under the Settlement are designed to address both physical and economic withholding, and conduct such as that hypothesized by the New Jersey Rate Counsel could fall within that definition, depending on the specific facts. However, the New Jersey Rate Counsel neither offers specifics of particular actions, nor proposes any modifications to the mitigation provisions that it considers necessary to address such behavior and, in the absence of such specific statements, the Commission is not persuaded that the stronger price signals and opportunity for forward commitment provided by the Settlement will fail to provide new entrants an incentive to enter the capacity market.

f. Insufficient Transmission Capacity

137. While the Pennsylvania Commission does not oppose the Settlement, and Portland Cement is a signatory to the Settlement, both parties state that the Settlement is an excessive administrative intrusion into the market and fails to address the real cause of market power – insufficient transmission capacity.

138. It is true that aspects of the Settlement capacity market are purely administrative, but the current prices for capacity are also determined administratively. It is our view that the Settlement will allow market forces to operate to incent new entry of generating capacity more effectively than the current capacity market. While some elements of the

's capacity market created by the Settlement are administratively determined, such as the Cost of New Entry, the Settlement nonetheless provides a market under which, at least initially, generators make offers to serve customers. While that administratively determined demand may serve as a cap on a market, it does not negate the fact that RPM is a market. Additionally, in a region such as PJM, where some states have eliminated the obligation to provide service, the only way to ensure a just and reasonable rate and to provide price signals would be through an energy-only market without offer caps (discussed below), or capacity markets. The capacity market set into place by the Settlement, with its locational component and downward-sloping demand curve, will send price signals more effectively than the current construct.

139. Moreover, under the Settlement, transmission can compete with both generation resources and demand response to provide solutions to capacity constraints, in that "participation by transmission providers will also be integrated into the RPM capacity market, by allowing for planned transmission upgrades that provide incremental increases in import capability into constrained areas to be offered into the auctions."[98] The Commission also has just accepted a filing by PJM to revise its regional transmission expansion plan process so that needed transmission investments can be made when necessary for reliability or economic reasons.[99]

g. Challenges to Market-Based Ratemaking

140. The New Jersey Rate Counsel states that, because the Settlement will result in the same prices being paid for new generating plants and old generating capacity, it could produce prices for generation for old depreciated plants above the rate of return on equity approved for those plants – a result that would not have been permitted under cost-of-service ratemaking, and further, that Congress has never approved the Commission's market-based ratemaking methodology. New Jersey Rate Counsel states that just and reasonable rates are those that provide "a reasonable compensatory level of rate of return on equity for each generation investment, but not an excessive return on such investments," and state that under this standard, RPM is not just and reasonable.[100]

141. We disagree with New Jersey Rate Counsel, whose argument in essence seeks a return to cost-based ratemaking under which the price each resource receives is solely a

[98] April 20 Order at P 77.

[99] *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,218 (2006).

[100] New Jersey Rate Counsel comments at 4.

function of its costs. In a competitive market, prices do not differ for new and old plants or for efficient and inefficient plants; commodity markets clear at prices based on location and timing of delivery, not the vintage of the production plants used to produce the commodity. Such competitive market mechanisms provide important economic advantages to electricity customers in comparison with cost of service regulation. For example, a competitive market with a single, market-clearing price creates incentives for sellers to minimize their costs, because cost-reductions increase a seller's profits. And when many sellers work to minimize their costs, competition among them keeps prices as low as possible. While an efficient seller may, at times, receive revenues that are above its average total costs, the revenues to an inefficient seller may be below its average total costs and it may be driven out of business. This market result benefits customers, because over time it results in an industry with more efficient sellers and lower prices. By contrast, sellers have far weaker incentives to minimize costs under cost-of-service, because regulation forces a seller to reduce its prices when the seller reduces its cost. The Commission has previously found single clearing price markets to be just and reasonable,[101] and New Jersey Rate Counsel has made no showing as to why the use of a single clearing price here would be unjust and unreasonable.

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[101]The Commission has stated in regard to another such market that:

> with regard to . . . concerns that . . . all winning bidders would be paid a uniform price regardless of their actual cost of supplying electricity and that the clearing price would be set by the highest-cost winning bidder in the auction, this pricing methodology is known as the "single clearing price" method and has the benefit of encouraging all sellers to place bids that reflect their actual marginal opportunity costs. . . . The single price method has been proposed and found to produce just and reasonable rates for all the energy and ancillary service markets currently operated by the independent system operators and regional transmission organizations under our jurisdiction.

Commonwealth Edison Company, 113 FERC ¶ 61,278 at P 43 (2005) *citing to New York Independent System Operator, Inc.*, *order on reh'g*, 110 FERC ¶ 61,244 at P 65 n. 76 (2005) (explaining that NYISO uses this method because "under this model, the generator has the proper incentive to bid the lowest price that covers its marginal cost, knowing that if the market produces a higher price it will receive the market price") and *New England Power Pool*, 85 FERC ¶ 61,379 (1998), *reh'g denied*, 95 FERC ¶ 61,478, 61,074 (2001) (approving market clearing prices in energy and ancillary services markets).

h. Energy-Only Market

142. PPL, in reply comments, urges the Commission to introduce reforms now, in parallel with implementation of the Settlement, to bring about an energy-only market that allows supply and demand to set the energy market clearing price.

143. The Settlement submitted to the Commission by PJM and the Settling Parties provided for a capacity market for PJM, and the Commission has found this capacity market to be just and reasonable. In theory an energy-only and ancillary services market could also produce sufficient capacity, but for such markets to succeed, PJM would have to relax its offer caps and make less stringent its mitigation provisions –positions for which there does not appear to be broad regional support.

144. In addition, the Settlement as it now exists does provide for interaction between PJM's capacity and energy markets. The revenues earned in the energy market will affect the price for capacity: capacity market revenues (and thus, the importance of capacity markets in eliciting adequate infrastructure) will be reduced as energy market revenues increase. That is, expected revenue from the energy and ancillary service markets will reduce the height of the demand curve, and thus, reduce the prices and revenues received by resources in the capacity market. Thus, to the extent that energy market revenues increase, capacity market revenues could be reduced proportionately so that the overall rate remains just and reasonable. As discussed elsewhere in this order, the Commission is encouraging PJM and its stakeholders to use and to further develop mechanisms such as demand response that will enable end users to act on price signals. And in other proceedings, PJM has already provided a scarcity pricing mechanism that will send price signals to energy suppliers to incent the provision of energy in scarcity situations.[102]

i. Speculative Nature of Settlement

145. The Virginia Commission and the New Jersey Rate Counsel state that the Settlement offers no guarantee of success. JP Morgan, Maryland People's Counsel, and the New Jersey Commission similarly argue that the Settlement will raise prices without improving reliability, or else that any improvements are too speculative.

146. We note that no market system can guarantee success. However, we have found that the current capacity market is unjust and unreasonable because it does not provide sufficient capacity to ensure reliability. As discussed earlier, the Settlement establishes a just and reasonable replacement for the existing construct by creating financial incentives

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[102] *See PJM Interconnection, L.L.C.*, 112 FERC ¶ 61,031 (2005).

within the context of a market system to encourage investment in additional infrastructure in the locations where they are needed. The evidence and simulations provided by PJM projects that the capacity market as structured by the Settlement, in coordination with the energy market, should provide for sufficient capacity to solve PJM's capacity problems. As discussed above, PJM's energy market does not provide for sufficient revenue to assure reliability given the constraints imposed by price caps and mitigation, as well as the need to procure capacity above the current demand level. The Commission finds that RPM, by providing for a three-year forward market in better defined geographic markets, along with a downward sloping demand curve, is superior to the current capacity market and, based on the evidence submitted, should procure sufficient capacity to solve PJM's capacity needs.

147. In addition, PJM is responsible for assuring reliability and can file to revise RPM if it fails to provide for sufficient capacity to assure reliability. The Settlement leaves in place the originally-filed Tariff provisions that require PJM to evaluate the need for changes to the Variable Resource Requirement Curve or its parameters at least every three years, to report on the performance of RPM within four and a half years after RPM is implemented, and to investigate the costs and benefits of transmission upgrades in the regional transmission expansion planning protocol if elevated locational prices do not result in new entry. Consistent with these provisions, even before three years have elapsed, if available evidence indicates that RPM is not working as intended to promote reliability, PJM will investigate the causes and exercise its section 205 rights to file any necessary changes if warranted. Additionally, PJM's market participants may and should act to address deficiencies that they see in PJM's capacity markets, whether through PJM stakeholder processes or through seeking relief from the Commission.

The Commission orders:

(A) The Commission approves the Settlement.

(B) The Commission requires PJM to submit, within 30 days of the date of this order, a compliance filing that provides equivalent treatment to all similarly-situated parties with regard to the bid adder provision, the availability of Mandatory Capital Expenditure treatment to all qualified units and the availability of the Fixed Resource Requirement alternative to single customer Load Serving Entities, as discussed above.

(C) The Commission requires PJM to submit, within 30 days of this order, changes to the provisions establishing a fixed cut-off date for the Mandatory Capital Expenditure provision, so as to extend that treatment to additional coal-fired plants as they reach 50 years of commercial operation, as discussed above.

(D) The Commission requires PJM to submit, within 30 days of the date of this order, a compliance filing that provides market participants with an opportunity to seek review by the Commission of any exercise by the Market Monitor of its discretion under sections 5.14(h), 6.5(a) (ii) and 6.7 (c) of the Tariff. The Commission also requires PJM to file within nine months of the date of this order objective criteria to be used by the Market Monitor in reviewing bids under the above cited sections of the Tariff.

(E) Within 60 days of the date of this order, PJM is required to submit proposed Tariff revisions pertaining to the rules and criteria for participation of demand response within RPM.

(F) Within nine months of the date of this order, PJM is required to file the report on demand response discussed in the body of this order.

By the Commission.

(S E A L)

Magalie R. Salas,
Secretary.

Appendix A

The 23 areas that system planners currently test each year for deliverability are the 16 transmission owner zones, plus the following seven combinations or portions of those zones:

(1) The Mid-Atlantic Area Council (MAAC) region;

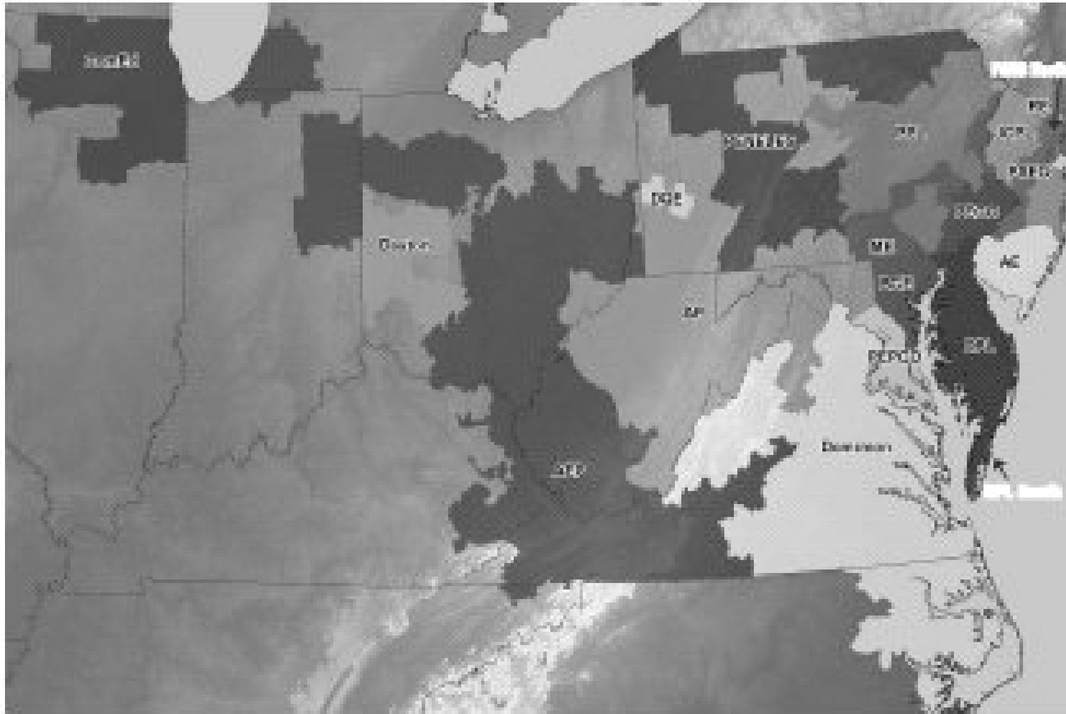
(2) The PJM West region consisting of the zones of Allegheny Power System (APS), Commonwealth Edison Company (ComEd), American Electric Power System-East Operating Companies (AEP), Dayton Power and Light Company (Dayton), and Duquesne Light Company (Duquesne);

(3) The eastern MAAC region, consisting of the zones of Public Service Electric & Gas Company (PSEG), Jersey Central Power & Light, Philadelphia Electric Company, Atlantic City Electric Company, Delmarva Power & Light Company (Delmarva), and Rockland Electric Company;

(4) The southwestern MAAC region, consisting of the zones of Potomac Electric & Power Company and Baltimore Gas & Electric Company;

(5) The western MAAC region consisting of the zones of Pennsylvania Electric Company, Metropolitan Edison Company, and PPL; the PSEG North region (the portion of the PSEG zone north of the Linden substation); and

(7) The Delmarva South region (the portion of the Delmarva zone south of the Chesapeake and Delaware Canal).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Appendix B

The Settling Parties are:

Allegheny Electric Cooperative, Inc.
Allegheny Energy Companies (Allegheny)
American Electric Power (AEP)
American Forest & Paper Association (AFPA)
Blue Ridge Power Agency
Con Edison Energy, Inc. (ConEd)
Constellation Energy Group, Inc. (Constellation)
Dayton Power & Light Co. (Dayton)
Dominion Resources Services, Inc. (Dominion)
Duke Energy North America, LLC (Duke)
Edison Mission Energy (Edison Mission)
Exelon Corporation (Exelon)
FirstEnergy Service Co. (First Energy)
FPL Energy Generators (FP&L)
Indiana Office of Utility Consumer Counsel (Indiana Consumer Counsel)
Indiana Utility Regulatory Commission (Indiana Commission)
Kentucky Public Service Commission (Kentucky Commission)
Liberty Electric Power, LLC
LS Power Associates, LP (LS Power)
Michigan Public Service Commission (Michigan Commission)
Mirant Energy Trading, L.L.C. (Mirant)
Mittal Steel (Mittal Steel)
North Carolina Electric Membership Corporation (North Carolina Electric Membership Corporation)
Old Dominion Electric Cooperative (ODEC)
Pennsylvania Office of Consumer Advocate
PEPCO Holdings, Inc. (PHI)
PJM Industrial Customer Coalition (PJMICC)
PJM Interconnection, L.L.C. (PJM)
Portland Cement Association (Portland Cement)
Reliant Energy Inc. (Reliant)
Southern Maryland Electric Cooperative, Inc. (Southern Maryland)
Virginia Municipal Electric Association
Williams Power Company, Inc. (Williams)

The following parties represented prior to the final vote that they would not oppose the Settlement (*see* Explanatory Statement at 1 n. 1):

American Municipal Power – Ohio (AMP-Ohio)
Borough of Chambersburg (Chambersburg)
Delaware Public Service Commission (Delaware Commission)
District of Columbia Office of the People's Counsel
Direct Energy Services, LLC (Direct Energy)
Duquesne Light Co. (Duquesne)
Easton Utilities (Easton)
Illinois Municipal Electric Agency (IMPA)
Northern Illinois Municipal Power Agency
NRG Energy, Inc. (NRG)
Ohio Consumer's Counsel
Ohio Public Utilities Commission (Ohio Commission)
Pennsylvania Department of Environmental Protection (Pennsylvania DEP)
Pennsylvania Public Utilities Commission (Pennsylvania Commission)
Public Power Association of New Jersey (PPANJ)
Rockland Electric Company (Rockland)
Strategic Energy LLC (Strategic Energy)

Appendix C

The following parties filed comments supporting the Settlement:

Portland Cement Association (Portland Cement)
Consolidated Edison Energy, Inc. (Con Ed)
Pepco Holdings, Inc. (PHI)
Mittal Steel USA (Mittal Steel)
Old Dominion Electric Cooperative ("ODEC")
American Forest and Paper Association (AFPA)
Dominion Resources Services, Inc. (Dominion)
PJM Interconnection, L.L.C. (PJM)
Exelon Corporation (Exelon)
American Electric Power Service Corporation (AEP)
Michigan Public Service Commission (Michigan Commission)
FPL Energy Generators (FPL)
Kentucky Public Service Commission (Kentucky Commission).

The following parties filed comments opposing the Settlement:

BP Energy Company (BP Energy)
PPL Parties and PSEG Companies (PPL/PSEG)
Long Island Power Authority and its operating subsidiary LIPA (LIPA)
Maryland Office of the People's Counsel (Maryland People's Counsel)
New Jersey Board of Public Utilities (New Jersey Commission)
New Jersey Department of the Public Advocate's Division of Rate Counsel (New Jersey Rate Counsel)
Coral Power, L.L.C. (Coral Power).

The following parties filed comments that neither supported nor opposed the Settlement:

J.P. Morgan Ventures Energy (JP Morgan)
NRG Companies (NRG)
Virginia State Corporation Commission (Virginia Commission)
Pennsylvania Public Utility Commission (Pennsylvania Commission)

On October 27, 2006, the Indiana Utility Regulatory Commission (Indiana Commission) also filed comments supporting the Settlement.

On October 30, PJM and PHI filed reply comments supporting the Settlement.

The Public Power Association of New Jersey (PPANJ), Ohio Consumers Counsel (OCC), Indicated Buyers[103] and Capacity Buyers and Suppliers[104] filed comments primarily opposing the changes to the Settlement suggested by PPL/PSEG.
The Delaware Municipal Electric Corporation (DEMEC) filed reply comments opposing the Settlement.

Coral Power, BP Energy, PPL/PSEG, and the PPL Companies separately from PSEG also filed reply comments.

On November 8, 2006, PPL/PSEG filed a motion for leave to reply, and a reply to other parties' reply comments, and PJM filed a motion asking the Commission to strike DEMEC's reply comments on the basis that DEMEC did not file initial comments, is now seeking to oppose the Settlement for the first time, and is seeking to do so after the date ordained for initial comments by Rule 602(f)(2).

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[103] The Indicated Buyers are North Carolina Electric Membership Corporation, ODEC, the Pennsylvania Office of Consumer Advocate, PJM Industrial Customer Coalition, Southern Maryland Electric Cooperative, Inc., and Virginia Municipal Electric Association No. 1.

[104] The Capacity Buyers and Suppliers are Constellation Energy Commodities Group, Baltimore Gas and Electric Co., and other affiliates (Constellation), Dominion Energy Marketing, Virginia Electric and Power Co., and other affiliates (Dominion), Duke Energy, Edison Mission Energy, Exelon, FPL, the Mirant Companies (Mirant) and Williams Power Co. (Williams).

Appendix D

The following parties filed requests for rehearing of the Commission's April 20 Order on the issue of whether the Commission properly found that PJM's existing capacity market rules are not just and reasonable:

Coalition of Consumers for Reliability (CCR), consisting of:

Pennsylvania Office of Consumer Advocate, Maryland Office of the People’s Counsel, Office of the People’s Counsel for the District of Columbia, Office of the Ohio Consumers’ Counsel, Old Dominion Electric Cooperative, North Carolina Electric Membership Corporation, Delaware Municipal Electric Corporation, Inc., Allegheny Electric Cooperative, Inc., Borough of Chambersburg, Pennsylvania, Southern Maryland Electric Cooperative, Inc., Illinois Citizens Utility Board, Virginia Division of Consumer Counsel

PJM Industrial Customer Coalition (PJMICC)

Pennsylvania Public Utility Commission and Delaware Public Service Commission (Pennsylvania and Delaware Commissions)

American Municipal Power-Ohio and Easton Utilities (AMP-O/Easton)