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**Comments of the Market Monitor re
In the Matter of the Board's
Investigation of Capacity Procurement
and Transmission Planning
Docket No. EO 11050309**

The Independent Market Monitor for PJM

June 17, 2011

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President Solomon and Commissioners, thank you for the opportunity to comment on the Board's investigation of capacity procurement and transmission planning in New Jersey. I am the Independent Market Monitor for the PJM ("IMM"), where my responsibility is to monitor and report on the PJM markets and recommend changes to the PJM market rules and market design in order to ensure competitive outcomes. I am independent of PJM, and I do not speak for PJM.¹

New Jersey clearly has the right and the obligation to address its own reliability needs if it does not think they are being adequately addressed through the PJM markets. While there is no evidence that this is the case now or that it will be in the immediate future, New Jersey has legitimate concerns about the design and operation of the PJM capacity market that must be addressed.

The Board's Order in this matter raises a number of questions including: "Whether the power market in any portion of New Jersey is not competitive, and if not, why?"

One of our functions as the IMM is to determine whether the wholesale power markets are competitive. The IMM makes such determinations on a regular basis and we report our conclusions in the annual and quarterly state of the market reports. The IMM has consistently found that the outcomes of the PJM wholesale energy and capacity markets are competitive.² This is the case for PJM as a whole and all locations within PJM, including New Jersey. The wholesale markets for energy and capacity produce competitive outcomes for New Jersey.

In the energy market, transmission constraints mean that less expensive power from the west is not always available in New Jersey when loads in New Jersey increase. The higher New Jersey energy prices that result when the transmission constraints are binding reflect the higher marginal costs of producing the energy in New Jersey to meet the load in New Jersey at those times. This is a logical, efficient and competitive outcome. When transmission constraints create local energy markets and there is structural market power in those local markets, the three pivotal supplier test and market power mitigation rules ensure competitive outcomes. The offer caps that are imposed reflect the marginal costs to generate energy.

In the capacity market, transmission constraints mean that less expensive capacity from the west is not always available in New Jersey. The higher New Jersey capacity prices that result when the transmission constraints are binding reflect the higher marginal costs of capacity in New Jersey to meet the requirement for capacity in New Jersey at those times. This is a

¹ The IMM is the Market Monitoring Unit (MMU) for PJM.

² See, for example, the 2010 *State of the Market Report for PJM*. All of the MMU's reports cited in these comments can be found at www.monitoringanalytics.com.

logical, efficient and competitive outcome. Under these conditions, a single capacity price for the entire PJM footprint would not provide the appropriate incentives to build in New Jersey when capacity is needed to maintain reliability and meet the loads in New Jersey. When transmission constraints create local capacity markets in specific RPM Locational Deliverability Areas (“LDAs”) and there is structural market power in those local markets, the three pivotal supplier test and market power mitigation rules ensure competitive outcomes. The offer caps that are imposed reflect the incremental costs to provide capacity.

The IMM’s analysis shows that capacity markets are necessary in PJM in order to ensure that the incentives are adequate to provide the desired level of reliability.³ Energy market net revenues are not adequate to keep a significant portion of existing units, across all technology types, financially viable. Net revenues from the energy market alone are less than the annual going forward costs for a significant level of capacity, across all generation technologies. When a unit receives less than its annual going forward costs in net revenue, it is more profitable for the unit to retire than to continue operation. Capacity market revenues make up that difference and provide the incentive for units to continue operation.⁴

In addition, energy market net revenues are not sufficient to incent new entry. The net revenues from the energy market are less than the annual going forward costs plus annual fixed costs of new units. In some zones, the sum of capacity market revenues and energy market net revenues is adequate to incent new entry. In those cases, capacity market revenues make up the difference and provide a key component of the incentive for new entry.⁵

Nonetheless, the PJM capacity market is not perfect. The IMM has identified a number of issues that result in less than optimal outcomes in the capacity market. These issues include: the use of a 2.5 percent reduction in demand; the definition of the demand side response (DR) product in the capacity market; the use of CETO/CETL analysis to determine locational capacity market conditions; the generation interconnection process; the use of different criteria to evaluate the need for capacity in the capacity market and the need to retain units under RMR (reliability must run) contracts for reliability; the inclusion in the planning

³ See the *2010 State of the Market Report for PJM*, Volume II, Section 5, “Capacity Market,” for a more detailed discussion.

⁴ See the *2010 State of the Market Report for PJM*, Volume II, Section 3, “Energy Market, Part 2,” Table 3-36.

⁵ See the *2010 State of the Market Report for PJM*, Volume II, Section 3, “Energy Market, Part 2,” at 175–189.

process of units that do not clear in the capacity market; the confusing NEPA rule; and the retirement notification period.⁶

The resolution of these issues will tend to result in capacity market outcomes that better reflect the economic fundamentals of supply and demand. This will make capacity market outcomes more predictable and reduce uncertainty as a barrier to new entry.

The LCAPP (Long Term Capacity Agreement Pilot Program) approach, as currently implemented, is not consistent with the operation of a competitive capacity market. LCAPP, as currently implemented, would result in: the procurement of capacity that is not needed for reliability; the procurement of capacity through a process that is discriminatory because it excludes existing generation; and the requirement to offer the procured capacity so that it clears in the PJM capacity auctions. The result of offering LCAPP capacity purchased through this auction structure into the PJM capacity market at prices less than cost would be to artificially depress prices in the PJM capacity market both inside and outside New Jersey. This would therefore negatively affect the incentives to build new generation both inside and outside New Jersey and would likely result in a situation where only subsidized units would ever be built in New Jersey. The IMM report, previously submitted to the New Jersey Board of Public Utilities, shows the detailed results that support the conclusion that such offers would depress capacity market prices below competitive levels.⁷

It is unlikely that the LCAPP offers would pass the MOPR as recently defined by FERC, although whether LCAPP offers pass MOPR is a function of whether the offers reflect the cost of new entry net of PJM market revenues, and the clearing prices in the relevant PJM capacity auction.

FERC's recent order ("April 12th Order") in the MOPR matter established clear terms for an acceptable MOPR.⁸ The Order defined the parameters for an offer to pass the MOPR screen. The order also defined an exception process under which a sell offer would be submitted to the MMU for review subject to the standard defined in Paragraph 122 of the order. Offers would be consistent with the MOPR standard even if they were less than the defined parameters (e.g. 90 percent of net CONE) as long as they were based on the actual costs and revenues of the project.

⁶ See the *2010 State of the Market Report for PJM*, Volume II, Section 5, "Capacity Market," for a more detailed discussion. In addition, the MMU publishes reports on each capacity auction, which can be found at <http://www.monitoringanalytics.com/reports/Reports/2011.shtml> and related pages.

⁷ See "Impact of the New Jersey Assembly Bill 3442 on the PJM Capacity Market," Monitoring Analytics, LLC (January 6, 2011).

⁸ See 135 FERC ¶61,022 (April 12th Order).

The order states:⁹

In conducting an individualized generation review, PJM proposes that: a sell offer would be permissible when such offer is consistent with the competitive, cost-based, fixed, nominal leveled, net cost of new entry were the resource to rely solely on revenues from PJM-administered markets. We find that this standard is appropriate for reviewing such cost estimates and that PJM must include this language in its revised tariff.

But the MOPR order did not explicitly address the issue of long term contracts. The IMM has recommended in FERC filings and recommends to the New Jersey Board of Public Utilities an approach that fits with competitive capacity markets and permits long term contracts consistent with the public policy goals of New Jersey.

The IMM is aware of concerns raised by a number of parties about the impact of the revised MOPR on the ability of LSEs to enter into long term contracts and to arrange for self supply. The Market Monitor recommended in its comments in FERC proceedings addressing the MOPR an additional process that would address these concerns through provision for a competitive, non-discriminatory procurement process entirely consistent with the MOPR:

If the self supply is acquired under a competitive and non-discriminatory procurement process, it could be offered in the RPM auction without a MOPR limit. A procurement process would be discriminatory, for example, if it accepted offers solely from new units and not from existing units. No RPM rules should inhibit competitive responses to market signals. Market entities including public power agencies and LSEs may wish to enter into long term contracts for physical supply, or to buy or build under a range of options not incorporated in the one year RPM auctions. If the market entity conducts a verifiably open, competitive, non-discriminatory process for acquiring such a contract, the resultant contract with the lowest cost supplier would pass MOPR under the exception process. If the self build option were similarly demonstrated to be the least cost option using a competitive process, even if it were funded using the standard regulatory rate base rate of return approach, then it would also pass MOPR under the exception process. Supply procured under either approach could be offered into RPM

⁹ See 135 FERC ¶61,022 at P 122.

auctions without a lower bound. Lowest cost could be defined using a net present value criterion as well as current expectations of future energy market revenues.

Self supply, when it is based on a discriminatory acquisition process, would be subject to the MOPR. For example, if the acquisition process restricted participation to only new units, the process would be discriminatory and any associated offers would be subject to making an offer at no less than the minimum price specified in the MOPR.¹⁰

This proposal has not yet been addressed by the FERC. However, this approach would meet the legitimate concerns raised by LSEs, by public power entities and by the New Jersey Board of Public Utilities in a manner entirely consistent with the April 12th Order, and the Market Monitor continues to support developing such a rule in the PJM stakeholder process or pursuant to an additional compliance directive in the FERC proceeding. This approach offers a simple, clear, workable and consistent solution, that is also consistent with the directives in the April 12th Order.

There appears to be a disconnect between the New Jersey view of its capacity needs and the capacity needs of New Jersey reflected in the capacity market (RPM). There is no evidence incorporated in the capacity market that New Jersey is short of capacity. But, New Jersey has a legitimate basis for concerns about reliability, including: the delays in the Susquehanna-Roseland transmission line; the existence of the Hudson Unit No. 1 RMR contract; state and federal environmental requirements; potential unit retirements; and siting issues for generation and transmission facilities.

With correct information inputs, markets are a flexible, least cost way to address these issues and uncertainties. Markets work best when the market design permits market outcomes to reflect the market fundamentals. Markets result in an appropriate assignment of risks and incentives between developers and customers. Markets may not work well if the market design does not permit market outcomes to reflect the market fundamentals.

A clear lesson from this proceeding is that New Jersey and PJM stakeholders, including PJM and the IMM, need to engage fully on the issues to ensure that the inputs to the markets are right, that New Jersey's reliability situation is fully and accurately reflected in market inputs and that the market design permits market outcomes to reflect these market fundamentals. For example, if New Jersey decides that they want certain older units to shut down for

¹⁰ See Motion for Leave to Answer and Answer of the Independent Market Monitor for PJM in Docket No. EL11-20 at 4–5 (March 21, 2011); see also Protest of the Independent Market Monitor for PJM in Docket No. EL11-20 (June 2, 2011).

environmental reasons, New Jersey should take actions which will directly produce that result. When the information about the reduced capacity which results is incorporated in the capacity market, the economic fundamentals will change correspondingly and the market will address any resultant shortfall in capacity. This is a direct and targeted approach to resolving the environmental problem in this example. Entering into long term contracts with new units and forcing the new units into the market without directly addressing the environmental issues at existing plants is an indirect and inefficient approach to the problem in this example which does not resolve either the reliability or the environmental issues and creates unintended consequences.

As another example, if New Jersey does not believe that there should be an RMR contract for Hudson, New Jersey should raise the issue of why the RPM design results in Hudson not clearing in the auction but requiring an RMR contract to prevent its retirement. Entering into long term contracts with new units and forcing them into the market does nothing to resolve the market design issue that led to the RMR contract in the first place. Addressing that market design issue would directly result in a closer match between the outcomes of RPM and the reliability needs of New Jersey.

New Jersey's inputs on the other RPM issues are also critical to the functioning of the capacity market and to ensuring that the capacity market can meet New Jersey's need for reliability. Those issues, like the 2.5 percent offset or the treatment of units that do not clear in the capacity market, could have a significant impact on how the capacity market defines and addresses reliability issues in New Jersey and elsewhere. Ultimately New Jersey needs to be assured that the defined market parameters will lead to reliability. Full engagement on the issues and the willingness of stakeholders to address the issues raised by New Jersey are essential to ensuring that the PJM capacity markets can meet their goals of providing reliability at the lowest possible cost through competitive markets.

It is essential that any approach to the PJM markets and the PJM capacity market incorporate a consistent view of how the preferred market design is expected to work to provide competitive results in a sustainable market design over the long run. A sustainable market design means a market design that results in appropriate incentives to retire units and to invest in new units over time such that reliability is ensured as a result of the functioning of the market. There are at least two broad paradigms that could result in such an outcome. The market paradigm includes a full set of markets, most importantly the energy market and capacity market, which together ensure that there are adequate revenues to incent new generation when it is needed and to incent retirement of units when appropriate. This approach will result in long term reliability at the lowest possible cost. The market paradigm also fits well with New Jersey's competitive approach to the provision of retail service. The quasi-market paradigm includes an energy market based on LMP but addresses the need for investment incentives via the long-term contract model or the rate base/rate of return model. In the quasi-market paradigm, competition to build capacity is limited and does not include

the entire PJM footprint. In the quasi-market paradigm, customers absorb the risks associated with new investment through guaranteed payments under either guaranteed long term contracts or the rate base/rate of return approach. In the quasi-market paradigm there is no market clearing pricing to incent investment in existing units. The quasi-market paradigm also does not appear to fit well with New Jersey's competitive approach to the provision of retail service and would create significant rate design issues associated with the recovery of contract costs. The FRR paradigm is a subset of the quasi-market paradigm as it establishes an area outside the capacity market that requires regulatory payments to cover the costs of investment, but is preferable to the full quasi-market paradigm in that it limits the negative impacts on the balance of the market.

While I believe that the market paradigm is the preferred alternative, it is essential that the current choices about incentives and regulatory approaches be made with an explicit understanding of the short run and long run implications of these choices for the design of wholesale power markets and the interaction between wholesale power markets and retail markets. If New Jersey chooses LCAPP as currently structured, New Jersey is choosing the quasi-market paradigm. That paradigm will have to be extended to all generation facilities if it is to be sustainable and is unlikely to result in the lowest cost of reliability in the long run. Supporters of that paradigm should be prepared to support the logical extension of the paradigm required for the approach to be sustainable. If New Jersey chooses to proceed with recommendations to modify the PJM capacity market to better reflect the reliability realities of New Jersey, New Jersey is choosing the market paradigm. Supporters of that paradigm should be prepared to support the extension of the paradigm to all generation in PJM. If New Jersey chooses to create a competitive, non-discriminatory procurement process, that is consistent with the market paradigm, albeit with the choice of a particular approach to hedging the future costs of capacity in New Jersey. It would not be necessary for all capacity to be purchased under long term, guaranteed contracts because this approach is consistent with the functioning of competitive markets.

I hope that this proceeding is a significant step towards addressing New Jersey's reliability concerns within a market framework.

Respectfully submitted,

Joseph Bowring
Independent Market Monitor for PJM