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**Remarks of Stefanie A. Brand, Director**  
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**I/M/O the Board's Investigation of Capacity**  
**Procurement and Transmission Planning**  
**Board of Public Utilities**  
**State House Annex**  
**Committee Room 11**  
**Trenton, NJ**  
**Docket No. EO11050309**  
**October 14, 2011**

Good morning, my name is Stefanie A. Brand. I am the Director of the Division of Rate Counsel. The Division of Rate Counsel represents and protects the interests of all utility consumers - residential customers, small business customers, small and large industrial customers, schools, libraries, and other institutions in our communities. Rate Counsel is a party in cases where New Jersey utilities seek changes in their rates or services. Rate Counsel also gives consumers a voice in setting energy, water and telecommunications policy that will affect the rendering of utility services well into the future. With respect to the adequacy and reliability of electricity supply – the subject of this proceeding – consumers are the parties that are directly affected if service reliability falls below acceptable levels, and ultimately bear the cost of the provision of reliable service.

While my testimony today will focus on the issues raised by the Board in its Order Setting Additional Hearing, I think it is important to remember that the failure of the PJM

markets to support the construction of new generation serving New Jersey loads stems primarily from the lack of long term revenue certainty. The solution to the State's reliability lies not in the modification of PJM's interconnection process – although changes to the process are certainly needed - but in the development of the appropriate long term price signals sufficient to support a long term investment in new plant. I urge the Board to continue to pursue all available options for achieving future capacity adequacy in New Jersey, of which the LCAPP is one.

### **Questions 1, 2 and 3. The PJM Interconnection Process**

I would like to spend just a little time on Questions 1, 2 and 3 which relate to the PJM generation interconnection process. Rate Counsel believes that the lack of new generation being built in New Jersey is due in part to problems with the PJM interconnection process. The length of time potential new generation spends in the interconnection queue and interconnection cost uncertainties contribute to the difficulty in building new generation in New Jersey. Changes to speed up this process are currently under review at PJM and Rate Counsel generally supports the interconnection queue revisions currently under development by PJM and stakeholders. In addition, Rate Counsel specifically supports the BPU's six recommendations as contained in the Board's September 14, 2011 letter to PJM.

Possible modifications to the interconnection process that should be considered include:

1. A separate queue for projects less than 20 MW;
2. Reforming the treatment of capacity injection rights;
3. Changes to the queue cycle (issues include timing, breakaways from clusters, suspension protocols);
4. Having third party/independent agents performing interconnection studies instead of transmission owners;
5. Eliminating stability analyses for some projects;
6. Increasing deposits; and,
7. Modeling retirements in interconnection studies.

Several of these modifications could address the issues raised by the Board in its questions. For example, having at least the facility study performed by an independent third party could eliminate bottlenecks caused by transmission study delays and possibly speed up the interconnection process. The Board should continue to work with PJM and stakeholders in developing how this process would work.

The more significant and more difficult to resolve barrier to entry posed by the PJM interconnection process is the cost of interconnection. Often, interconnection costs are high and uncertain. At the Board's June 17, 2011 legislative hearing, John Schultz, Vice President of Energy Operations, on behalf of Hess Corporation, testified that Hess withdrew an interconnection request for a new generation project in Northern New Jersey because estimated interconnection upgrade costs "would have rendered that project financially infeasible."<sup>1</sup> Mr. Schultz further testified that projects proposed since that time continue to be plagued with unpredictable and (in his view) exorbitant upgrade costs. According to Mr. Schultz estimates of potential upgrade costs for a 2007 project "began at \$340 million in 2008, went down in 2009 to \$110 million, and went back up to \$180 million when PJM retooled our System Impact Study earlier this year."<sup>2</sup>

The uncertainty of the cost estimates provided by PJM is also a barrier. According to PJM, the analysis used to determine the impact of generating plants seeking to connect to PJM assumes that "every project that enters the interconnection queue is and remains viable."<sup>3</sup> PJM maintains that it does not have the discretion to choose which projects in the queue will remain

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<sup>1</sup> Comments of John Schultz, New Jersey Board of Public Utilities Investigation of Capacity Procurement and Transmission Planning, Docket No. EO11050309, June 17, 2011.

<sup>2</sup> Id. at 3.

<sup>3</sup> PJM Comments, New Jersey Board of Public Utilities Investigation of Capacity Procurement and Transmission Planning, Docket No. EO11050309, June 17, 2011, page 3.

viable and that it must assume that all proposed projects will proceed, even if that assumption is unlikely to be true. Moreover, when projects do drop out of the queue, PJM must re-study all remaining projects.<sup>4</sup> Rate Counsel urges the Board to investigate additional possibilities for simplifying the interconnection study process and determining a more accurate picture of required transmission upgrade costs.

Furthermore, the allocation of PJM Interconnection costs creates a significant barrier to entry. Currently, generators may be charged for the entire cost to upgrade a transmission system even if they are only partially responsible for the needed upgrade. For example, Hess claims that a line violation of less than 1% as far south as Baltimore has increased interconnection costs in New Jersey by \$30 million.<sup>5</sup> A more equitable allocation of these interconnection costs must be considered. Modifications to this allocation, such as spreading certain upgrade costs across all interconnecting generators that eventually “come to market” in an area of upgraded transmission should be further explored.

**Question 4: Regional Transmission Expansion Planning (RTEP) and Capacity Emergency Transfer Limits (CETL):**

Rate Counsel believes that it is not necessary to impose consistency on the assumptions used for long-term Capacity Emergency Transfer Limits (CETL) calculations for transmission planning and the nearer-term CETL estimates for use in RPM auctions. Rather, Rate Counsel believes that the focus should be on making the CETL calculations more stable and more transparent.

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<sup>4</sup> Id. at 26.

<sup>5</sup> Comments of John Schultz, New Jersey Board of Public Utilities Investigation of Capacity Procurement and Transmission Planning, Docket No. EO11050309, June 17, 2011, page 3.

In recent years, large changes in the CETL values used in RPM from year to year have substantially contributed to volatility and uncertainty in RPM clearing prices.<sup>6</sup> Such volatility and uncertainty discourages new entry. In its 2011 review of RPM, The Brattle Group made several recommendations to increase CETL stability. In particular, The Brattle Group recommended that easily-resolved transmission constraints, such as any that can be resolved with a low-cost upgrade, should not be allowed to limit CETL. Rather, The Brattle Group recommended that PJM could facilitate cost-effective transmission upgrades which would make the CETL values more stable. For the purpose of RPM, CETL values should be reasonable, robust estimates of the capacity likely to be available in the delivery year, minimizing the chance of large changes from auction to auction for a delivery year, and from year to year. Changes to make the CETL values more stable and transparent are being discussed at present through the PJM stakeholder process around the Brattle recommendations, and we support such changes.

Question #4 also suggests the inclusion of additional transmission reliability criteria (e.g., potential double circuit tower line violations) for the purpose of calculating CETL values for RPM. This increased level of conservatism would tend to lower CETL values, and increase LDA local capacity requirements, raising RPM prices and customer costs. The LDA reliability requirements and CETLs are already based on very conservative criteria and we do not support changes that would increase the stringency of those criteria.

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<sup>6</sup> Second Performance Assessment of PJM's Reliability Pricing Model, Market Results 2007/08 through 2014/15, The Brattle Group, August 26, 2011, p. 14-15 and Table 2 <http://www.pjm.com/~media/committees-groups/committees/mrc/20110818/20110826-brattle-report-second-performance-assessment-of-pjm-reliability-pricing-model.ashx> ] (hereinafter The Brattle Group Report).

**Question 5: RPM Locational Pricing Impact:**

RPM's locational pricing signals have not had, and should not be expected to have in the future, much influence over the long-term decisions regarding where to site new power plants.<sup>7</sup> Market participants will tend to ignore transmission-based locational price premiums because they are set one year at a time, are volatile, and can be expected to decline in future years, because PJM plans new transmission to reduce such constraints under its RTEP. Market participants know that new transmission capacity, new generation and changes to the RPM rules can reduce or eliminate locational price differentials.<sup>8</sup>

Market participants also know that PJM's calculations of zonal reliability requirements are very conservative and, therefore, may overstate the need for resources in zones and result in exaggerated locational price differentials.<sup>9</sup> For these reasons, market participants will heavily discount locational price differentials and will prefer to build where it is easier to build. Unfortunately, New Jersey is not a place where it is relatively easy to build.

In addition, for market participants who own generation in constrained zones, there is an added disincentive to build generation or transmission for the zone because incremental/decremental capacity affects the prices their other assets earn in locational energy, ancillary services and capacity markets.

Finally, there are relatively few good sites for new generation in New Jersey compared to other areas, and some of the best sites may be the locations of the existing plants of incumbents who, as noted, have disincentives to expand capacity. While other market participants may

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<sup>7</sup> See, I/M/O the Reliability Pricing Model and the 2013/14 Delivery Year Base Residual Auction Results, State of Maryland Public Service Commission, Administrative Docket PC22, comments and Responses to Questions of James F. Wilson on Behalf of Southern Maryland Electric Cooperative, Oct. 1, 2010, pp. 24-25, (hereinafter Wilson Testimony); [http://www.wilsonenec.com/Wilson\\_PC\\_22.php](http://www.wilsonenec.com/Wilson_PC_22.php)

<sup>8</sup> Id.

<sup>9</sup> Id. at 21.

propose new, efficient, and cleaner plants to replace old, high-cost and environmentally undesirable plants, incumbents may choose to continue to operate the older plants, continuing to use the Capacity Injection Rights and contributing to high interconnection costs for the new plants.

With regard to the high percentage of incremental capacity resources in New Jersey from withdrawn or cancelled retirements, we note first that this information comes from informal surveys and thus may not be statistically reliable.<sup>10</sup> If there is a high percentage, it may be because New Jersey has a disproportionate amount of older generation that is more likely to be considered for retirement.<sup>11</sup> Furthermore, New Jersey has had relatively high RPM prices that are more likely to entice an owner to reconsider a tentative plan to retire a facility.

#### **Question 6: RPM and Mid-Merit, Baseload Capacity:**

RPM is a capacity spot market that creates a one-year price signal most likely to influence short-lead-time and low capital investment decisions. Its volatile one-year price signals are unlikely to influence major investments with long time horizons. Indeed, short-lead-time, low investment incremental resources such as demand response, existing plant uprates, deferred retirements, and incremental imports have represented over 80% of the incremental capacity under RPM.<sup>12</sup> As Dr. Roy Shanker, consultant to PSEG Power, describes it, the current regime favors either no new construction, or “the lowest possible capital costs”; and the existing RPM

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<sup>10</sup> PJM 2014/2015 RPM Base Residual Auction Results, p. 23, [http://www.pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/20110513-2014-15-base-residual-auction-report.ashx](http://www.pjm.com/markets-and-operations/rpm/~/media/markets-ops/rpm/rpm-auction-info/20110513-2014-15-base-residual-auction-report.ashx)

<sup>11</sup> See, Presentation of New Jersey Department of Environmental Protection , BPU Capacity Technical Conference, June 24, 2010.

<sup>12</sup> PJM 2014/2015 RPM Base Residual Auction Results, p. 24, Table 9.

structure has “several biases that make higher capital investment risky.”<sup>13</sup> Rate Counsel expert James Wilson has also stated that by offering one year commitment and payment, RPM will primarily influence short term decisions such as whether to offer demand response, whether to keep a high cost plant in operation for another year or whether to import capacity into PJM or sell in another market.<sup>14</sup> These decisions generally have short lead time and require relatively small investments which can be influenced by a one year commitment and payment.

Accordingly, the RPM construct is not capable of effectively signaling the need for mid-merit and baseload capacity, or properly incenting construction of such capacity. Other centralized capacity market constructs outside PJM, which generally also offer commitments of one year or less, are no more able to incent such construction. New England has a provision that allows multi-year price commitments but it is rarely used.

In regions where capacity needs are fulfilled almost entirely through long-term bilateral arrangements rather than a centralized capacity spot market (such as in MISO, and in California), the long-term bilateral markets remain healthy and load-serving entities are in a better position to bring forth new mid-merit or baseload capacity under long-term contracts.

Can mid-merit or baseload resources be built without long-term contracts? We have heard over and over from potential entrants that the answer is No. Such resources won't be built to chase volatile capacity prices and locational price differentials that are expected to go away. We also doubt that the RPM mechanism can be effectively modified to offer long-term price assurance. RPM is fundamentally a one-year construct and sets a price based on demand and

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<sup>13</sup> PSEG Power's Reply Comments PSEG Power LLC and PSEG Energy Resources & Trade LLC, Affidavit of Dr. Roy J. Shanker, para 37, New Jersey Board of Public Utilities Investigation of Capacity Procurement and Transmission Planning, Docket No. EO11050309, July 12, 2011.

<sup>14</sup> Wilson Testimony, p.3.

supply for a single year. It cannot be effectively stretched to offer longer-term price assurances such as through a modified NEPA rule. The Brattle Group, commissioned by PJM to evaluate the performance of the RPM, agrees.<sup>15</sup>

We also have doubts that the voluntary long-term auction mechanism proposed by PJM will appreciably change this circumstance. Buyers and sellers are already free to enter into long-term bilateral contracts if they wish. A voluntary auction does not provide anything that is not already available. Furthermore, the voluntary auction would necessarily be for standardized, “capacity only” products with fixed attributes and durations, and no consideration of resource attributes. When contemplating long-term commitments, load-serving entities will consider all attributes of resources in their decisions.

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<sup>15</sup> The Brattle Group Report, p. 156.

## **Questions 7 and 8 - Structural Market Power**

New entry of generation resources in PJM is hindered by at least two major impediments faced by potential new generators: the interconnection process concerns addressed above, and the present difficulty in obtaining some assurance of revenues over the longer term. RPM does not provide the secure long-term revenue stream needed to support the financing of projects by new market entrants, and it does little to overcome other barriers to entry, such as the challenge in finding new sites. For the owners of the existing generation resources in these markets, who control many of the readily available sites for the construction of new generation, there is a disincentive to build, as the inability of newcomers to finance and build new facilities means higher prices and higher profits. Yet when states attempt to find ways around these barriers and provide incentives for new capacity construction, it is they who are accused of manipulating the market.

What can the Board do? Primarily the Board can continue to advocate for interconnection process reforms. As we mentioned in our earlier comments, the Board could also more formally investigate under its existing authority the extent to which structural market power creates barriers to new entry.

In addition, the Board should continue to pursue the LCAPP program. In the proceeding addressing PJM's Minimum Offer Pricing Rule that was largely directed toward thwarting the LCAPP, the FERC granted rehearing "for further consideration," which means that FERC is still considering the arguments that were raised on rehearing of its order. FERC also held a technical conference on certain issues raised by the protestors in their rehearing requests. PJM stakeholder processes are also considering changes to PJM rules around minimum offer prices, self-supply, and related topics. The proceedings on these issues at FERC and PJM are by no means over and

we should continue to pursue all available options for achieving future capacity adequacy in New Jersey, of which LCAPP is one.

**Question 9 - Economic Conditions/Load Forecasts Influence of Reliability Requirements**

Reliability requirements for 2012 and subsequent years have clearly been affected by the recent recession and current expectations of slower economic growth over the coming years. In addition, increasing levels of energy efficiency, demand response, and solar and other renewable resources will reduce the need for traditional generation resources to meet the lowered reliability requirements. PJM's recent load forecasts have generally revised prior-year forecasts downward, and we expect the next forecast (expected in January 2012) to again reflect a downward revision. These lower load projections have not obviated the need for new capacity, but they have lessened the urgency of the need.

### **Question 10: Fixed Resource Requirement (FRR):**

FRR as presently defined does not represent a viable alternative for New Jersey because 1) the FRR rules are highly inflexible and 2) to build an FRR portfolio for New Jersey or a New Jersey zone under the current rules would require long-term contracts with a considerable quantity of the existing generation in New Jersey, which is unlikely to be made available for such purpose at a reasonable price. Under different FRR rules such an option could become realistic. For instance, MISO has recently proposed to FERC capacity market opt-out provisions that are analogous to FRR but much more flexible.<sup>16</sup> In particular, under MISO's proposal:

- 1) a load-serving entity can opt out for one year at a time (PJM FRR requires five years);
- 2) a load-serving entity can opt out for a portion of its capacity obligation (PJM FRR is all-or-nothing for any qualifying region, generally a transmission owner's zone);
- 3) a load-serving entity that does opt out is permitted to buy and sell capacity in the proposed centralized market (a PJM FRR Entity's access to RPM is restricted).

Under PJM's FRR incumbent capacity owners are unlikely to offer capacity for an FRR plan at reasonable prices. The evidence is that the bilateral market that existed before RPM was implemented has all but disappeared, as capacity sellers find RPM too alluring.

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<sup>16</sup> (<http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12760172> p. 13).

## CONCLUSION

In sum,

1. Lower load forecasts delay but do not eliminate the need for new capacity.
2. The PJM interconnection process and interconnection costs are barriers to entry and efforts currently underway are heading in the right directions and should be supported.
3. The Board should also consider investigating the existing structural market power and barriers to entry of new generation in New Jersey.
4. But the main issue is that new mid-merit or baseload generation needs some longer-term assurance of revenues that is not available through RPM.
5. We do not see much prospect that RPM can be stretched to provide such long-term revenue assurance (such as through a revised NEPA rule), or that a centralized, voluntary auction of longer-term commitments will have an appreciable impact. Nor is it likely the FRR rules will be revised to offer a reasonable opt-out alternative.
6. Thus the need for Board initiative, such as it took with the LCAPP, remains.

Thank you for the opportunity to testify today. As I mentioned, on October 31, 2011, Rate Counsel will be filing written comments with the Board in connection with this proceeding. We are also available to answer any questions you may have.