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Governor

KIM GUADAGNO Lt. Governor Newark, New Jersey 07101 Stefanie A. Brand

Director

July 12, 2011

Via Hand Delivery and Electronic Mail

Secretary Kristi Izzo Board of Public Utilities Two Gateway Center Newark, NJ 07102

Re: I/M/O the Board's Investigation of Capacity Procurement and

Transmission Planning BPU Dkt. No. EO11050309

Dear Secretary Izzo:

Enclosed for filing please find an original and ten (10) copies of the Division of Rate Counsel's reply comments in the above referenced matter. These comments are being submitted pursuant to President Solomon's direction at the legislative-type hearing that was held on June 17, 2011. An electronic copy of these comments is being sent to the Board Secretary's e-mail account board.secretary@bpu.state.nj.us. A copy of these comments will also be circulated via the Board's electronic service list in this docket.

We are enclosing one additional copy of the materials transmitted. Please stamp and date the copy as "filed" and return it to our courier. Thank you for your consideration and assistance.

Respectfully submitted,

STEFANIE A. BRAND DIRECTOR, DIVISION OF RATE COUNSEL

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c: President Lee A. Solomon (via UPS Overnight Mail)
Commissioner Jeanne M. Fox (via UPS Overnight Mail)
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In the Matter of the Board's Investigation of Capacity Procurement and Transmission Planning BPU Docket No. EO11050309

Comments of the New Jersey Division of Rate Counsel June 17, 2011

1. Introduction

Rate Counsel applauds the Board for its approach in this proceeding, which is based on a comprehensive review of New Jersey's needs followed by the development of a comprehensive policy to address those needs. While such an approach should not seem unusual, it unfortunately contrasts with that of FERC and PJM, whose decision making process is compartmentalized, making the development of an integrated, overall solution much more difficult. FERC's decision with respect to the MOPR reflects the singular concern that the "market" be preserved, but fails to offer any reasonable (let alone integrated) solution to New Jersey's capacity issues.

What is evident from the comments and testimony in this proceeding is that the current system, put into place by PJM and addressed in recent proceedings by FERC:

- is not sufficient to assure a long-term stream of revenue that will enable those seeking to construct new cleaner generating facilities to obtain the requisite financing; and
- places greater emphasis on preserving the sanctity of an administratively constructed market than on truly assessing whether that market is in fact working; and
- 3. relies heavily on the continued operation of outdated generation and the construction of prospective transmission that can be difficult to site and is subject to numerous delays.

The inefficiencies that result from this process have led to New Jersey's current predicament. We have no assurance that the system that is in place will continue to provide sufficient capacity to New Jersey beyond the three-year planning horizon associated with RPM. We have no assurance that the State will be able to pursue its legitimate policy goals of moving toward greater reliance on cleaner fuels and utilizing our energy policy to promote economic development. Given these circumstances, Rate Counsel urges the Board to continue its broad examination of the issues and its effort to identify the actions that can be taken to address them.

In its comments below, Rate Counsel highlights several issues fleshed out during the course of these proceedings that are central to developing a comprehensive policy going forward. Rate Counsel relies on its prior comments in this matter and will endeavor not to repeat them here.

- 2. The Board's policy going forward should account for issues RPM does not and cannot address.
 - a. RPM does not distinguish between types of capacity.

PJM's capacity auction treats all resources as equal regardless of the facility's environmental impact, fuel efficiency or overall economic benefit to society. In other words, demand-response resources, an aging coal plant, a forty year old combustion turbine that only runs a few hours a day or the highest efficiency gas turbine all receive the same capacity price in the RPM market.

In initial comments to the Board, PJM argued that the Board's "focus on new generation construction alone . . . is too narrow" and that any evaluation of the effectiveness of RPM "must also consider the ability to maintain resource adequacy at the lowest possible cost from new and existing generation resources as well as Demand

Response and Energy Efficiency resources." This sentiment was repeated by the PJM's Independent Market Monitor ("IMM") who testified at the legislative hearings that "part of this discussion over the long haul has been focused on new units when in fact what you want is capacity, you want reliability and it shouldn't matter whether it comes from demand side resources, whether it comes from a thirty or forty year old unit or a one year unit." T176:11-19

In our view, these comments are misguided. New Jersey is wholly within its rights to establish policies that do not treat all capacity identically. New Jersey is free to promote an appropriate resource mix for its citizens, encourage economic development, and preserve the environment. Indeed, these specific goals led to the legislature's enactment of the LCAPP statute and the federal wholesale market system does not eliminate the State's ability to pursue these goals.

The testimony at the hearing supports pursuing a program such as LCAPP in order to meet these goals. Steve Remillard, the Vice-President of Development for Competitive Power Ventures ("CPV") testified that the resources selected pursuant to the LCAPP legislation "have the potential to deliver significant economic and environmental benefits to New Jersey ratepayers that otherwise would not have been possible."

T203:22-25 Similarly, Ray Long, Vice-President of Government Affairs for NRG Energy Inc. estimated that NRG's Old Bridge project would add 660 MWs of clean generation into a congested area, would create approximately eight hundred construction jobs and up to thirty permanent jobs. Including supply chain related jobs, Mr. Long estimated that the project would have an aggregate economic output of approximately \$500 million. T211:2-6

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¹ Comments of PJM Interconnection, LLC, June 16, 2011, p.9-10

Thus, while RPM is blind to the State's policy choices and treats all capacity the same, New Jersey, in enacting the LCAPP legislation and through this proceeding, has chosen to pursue a policy that does not rely solely on the lowest cost, short term resource secured by RPM but seeks instead to develop a resource mix consistent with environmental and economic development goals. New Jersey's authority to pursue such policy goals is not abrogated by federal law and should not be abandoned in favor of preserving the flawed operation of RPM.

b. RPM evaluates and selects resources based on a one-year time horizon.

RPM awards one-year commitments based on demand and resource costs representing a single year. This short-term, incremental, year-by-year approach fails to properly value resources that promise to help meet New Jersey's needs over the longer term.

John Schultz, the Vice President for Energy Operations for Hess Corporation, called the lack of a long term price signal "one of the largest obstacles to generation development" in New Jersey.² Mr. Schultz noted that while a one year capacity price is an effective incentive for an older resource to remain operational, "for would-be developers of new generation, such a volatile and short term price signal is insufficient to make the necessary investment."³

c. RPM favors incumbent generators over new cleaner more efficient generation.

RPM's focus on the lowest cost resources available in the near term favors the status quo over cleaner more efficient technologies. As noted by several parties in this

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² Comments by John Schultz, Vice President of Energy Operations on behalf of Hess Corporation, (hereinafter Hess Comments) June 17, 2011, p. 2

³ <u>Id</u>. at 5.

proceeding, reliability is achieved in large part through RPM's funding of older, dirtier inefficient generation and less through the development of new, cleaner, more efficient resources. For example, Mr. Schultz characterized RPM as essentially "a subsidy to most existing units by providing them capacity payments that generally exceed their going forward operational costs without the price certainty needed to encourage new, efficient clean generation which is a major goal for New Jersey as outlined in the recently issued Draft Energy Master Plan."

Indeed, a study conducted by Synapse Energy Economics filed in this proceeding indicates that, for PJM, "95% of the capacity market revenues have gone to existing generation." The authors of the Synapse Report found that "[h]igh capacity prices in local markets have increased the profitability of incumbent generation at ratepayer expense, but have not led to significant investment in new power plants." PJM argues that the per-MW cost of the resources acquired through RPM is cheaper than the cost to build new generation resources in New Jersey. PJM calculates this "benefit" by comparing the price of capacity prior to the RPM auction divided by the incremental capacity committed to New Jersey since the inception of RPM. The calculation is overly simplistic and considers all capacity equally valuable. As discussed previously, all capacity is not equal and to equate the cost of one year's worth of demand response with the cost to build a gas-fired combustion turbine is nonsensical. PJM also uses 2001 as its baseline, when capacity prices were the highest and capacity market prices reflected the

⁴ Hess Comments, p. 5.

⁵ Appendix A to Joint Comments of the Public Power Assn of New Jersey and the American Public Power Assn, *Incenting the Old, Preventing the New, Flaws in Capacity Market Design, and Recommendations for Improvement*, June 14, 2011, Matthew Wittenstein and Ezra Hausman, Synapse Energy Economics, (hereinafter "the Synapse Report"), p. 2.

⁵ Id. at 1.

⁷ PJM Comments, p. 14.

"significant exercise of market power." Average capacity prices in 2001, elevated by the exercise of market power, were over 50% higher than any other year during the period before RPM was implemented. ⁹ Thus, PJM's estimate of savings is overstated.

d. The solution must include regulatory policies and market actions that augment RPM, not merely an acceptance of the status quo.

In initial comments filed in this proceeding, PJM's Independent Market Monitor said: "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.)." Dr. Bowring acknowledged that while "there is no evidence incorporated in the capacity market that New Jersey is short of capacity" New Jersey certainly has a legitimate basis for concerns about reliability. Dr. Bowring cited delays in the Susquehanna-Roseland transmission line, the Hudson 1 RMR contract, state and federal environmental regulations, potential unit retirements and generation and transmission siting issues as causes for concern. Dr. Bowring suggests however that the onus is on New Jersey to ensure that these realities are reflected in the PJM markets and that "with correct information inputs, markets are a flexible, least cost way to address these issues." For example, Dr. Bowring suggests that New Jersey could shut down dirty generation for environmental reasons and that "when the information about the reduced capacity which results is incorporated in the capacity market, the economic fundamentals will change

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http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2001/200206-pjmmmusom-2001.pdf, p.8

⁹ http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2011/2011q1-som-pjm-sec5.pdf,
p. 143, Figure 5-1.

Comments of the Market Monitor, June 17, 2011, p. 5.

¹¹ <u>Id</u>.

correspondingly and the market will address any resultant shortfall in capacity." Thus, it seems Dr. Bowring suggests that New Jersey should find ways to withdraw supply from the market to force capacity prices to go even higher, which, he suggests, might lead to construction of new capacity.

Similarly, the New Jersey electric utilities argue that the failure to foster the development of new generation in New Jersey is not because the market does not work but because prices are too low. "Lack of new baseload construction is not a sign of market failure unless price signals are high enough to justify development but entry still does not occur. This has not been the situation"¹³

This belief in a perfectly functioning capacity market is not supported by reality. To date, high capacity prices have not led to the construction of new generation in the constrained areas of PJM. In fact, the opposite is true. As noted in the Synapse Report, RPM prices for the non-constrained RTO region have been below PJM's estimate for net-CONE in five of the past six auctions. And yet, the Synapse Report finds that despite low prices, new resources have consistently been added to the unconstrained region of the market. On the other hand, prices in constrained areas of PJM "have been much higher – yet new supply resources in these capacity-short regions have not been forthcoming." The Synapse Report concludes "Clearly and unsurprisingly, one-year price guarantees are not sufficient to drive 9- or 10- figure investments in generating resources with operating lives of decades."

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¹² Id. at 6.

¹³ Comments of Frank C. Graves, Principal, The Brattle Group, on behalf of New Jersey EDCs, p. 11.

¹⁴ The Synapse Report, p. 6.

¹⁵ <u>Id.</u>

Other parties in this proceeding agreed with the concerns stated by Synapse. As noted by Mr. Remillard of CPV:

I'd like to be clear here and emphasize that the issue is not necessarily one of price. In fact, recent RPM clearing prices have approached levels potentially high enough to support new generation. The issue instead is the length of time that such prices can be "locked in." RPM only provides revenue certainty for a period of one year for most resources, though in limited circumstances a three-year commitment is possible via the New Entrant Pricing Adjustment provision. It's an irrelevant distinction, however, as neither tenor is sufficient to attract the debt or equity financing necessary to construct new generation resources with useful lives of 30 or more years. ¹⁶

Similarly, NRG commented that "the existing capacity market, however, is imperfect in that it provides only short-term price signals and does not provide sufficient long-term price-risk management tools." NRG noted that it has in the past, without success, supported incorporating a 10 year lock-in into the RPM rules. Hess also argued that RPM's volatile and short term price signal was insufficient for developers of new generation to make the necessary investment. ¹⁸

Thus, the solution to the State's reliability lies not with tighter supply and higher prices but rather in the development of the appropriate long term price signals sufficient to attract the development of new, more efficient generation to constrained areas of PJM. The LCAPP law provides such a mechanism by offering developers capacity price certainty for a period of time sufficient to support a long term investment in new plant. While the EDCs have compared the LCAPP contracts with the NUGs, it is factually incorrect to burden the LCAPP resources with this label. The LCAPP resources represent capacity, not energy,

¹⁶ Comments of Competitive Power Ventures, Inc., June 17, 2011, p.2.

Comments of NRG Energy, Inc. June 17, 2011, p. 4.

¹⁸ Hess Comments, p. 5.

contracts and the prices are based on a competitive solicitation. These two elements alone render them materially and substantially different from the NUG construct. The LCAPP contracts are not subsidized resources but are merely resources used to meet the PJM capacity obligations and contracted for under a standard "contract-for-differences" arrangement present in competitive power markets worldwide. LCAPP providers, unlike the NUGs, are fully at risk for all energy price movements in the market.

3. Capacity adequacy in New Jersey is and will continue to be a concern.

a. RPM has not fostered the construction of new capacity in New Jersey.

There has been much said in this proceeding about the amount of capacity that PJM has secured through the operation of RPM. PJM claims that since its inception in 2007, RPM has made available 42,173 MW of "New Capacity Resources" to meet reliability obligations, including 5,565 MW in New Jersey¹⁹. PJM asserts that this new capacity includes new generation capacity resources, capacity upgrades to existing capacity resources, generation reactivation, new demand resources, upgrades to existing demand resources, new energy efficiency resources, and "Cleared ICAP from Withdrawn or Cancelled Retirements."

The largest component of the New Jersey "New Capacity Resources" (2,222.8 MW) is not new generating plant but cleared ICAP from withdrawn or cancelled retirements, while another 193.7 MW is from generation reactivation. Together, these

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¹⁹ PJM Comments, Table 1 and 2, page 13.

two sources are 43% of the total New Jersey "new capacity²⁰," and represents fully twothirds of all supply-side resources clearing RPM in New Jersey. At some point, these aging plants will have to retire. New Jersey needs to address this issue now rather than sit back and wait while supply tightens and electricity prices go even higher.

The second largest component of "New Capacity Resources" in New Jersey is 1947.4 MWs of Demand Response and Energy Efficiency. Demand response is only a one year commitment, bid into the RPM three years in advance. At the hearing, a PJM witness acknowledged that when the economy improves plants may no longer find it beneficial to shut down to save money. "So there is also a risk if the economy picks up those who are participating and willing to interrupt now may not under a good economy. ... they may find it being more profitable to run than to interrupt." T53:1-7.

The remaining one-third of supply resources consists of upgrades at existing plants and new generation. Upgrades at existing plants account for 666.2 MWs of new capacity leaving only 534.8 MWs of actual new generation, less than 10% of the total "New Capacity Resources." All of the 534.8 MWs of New Jersey new generation is either peaking generation, solar resources or a few small landfill gas generators. No midmerit plants have been constructed.²¹

Thus, while PJM asserts that it is reasonably confident that "in the immediate future . . . we can maintain reliability" through RPM, (T53:16-20), the Board must recognize that the generation resources that PJM is relying on to ensure reliability are

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 $^{^{20}}$ 2,222.8 MW plus 193.7 MW equals 2,416.5 MW, which is 43% of the total of 5,564.9 MW listed in PJM's Table 2.

²¹ PJM active generation interconnection queue data, at http://www.pjm.com/planning/generation- interconnection/generation-queue-active.aspx, and review of queue data impact studies.

aging plants or short term resources such as demand response. This is not a secure basis on which to build New Jersey's energy future.

b. PJM's confidence that New Jersey's energy needs will be met in the future is heavily dependent on the successful completion of the Susquehanna-Roseland transmission line.

PJM recognizes that one of the most important issues raised by the Board in this proceeding is "the possibility of power shortages from the delay in the Susquehanna-Roseland 500 kV transmission line (S-R line)."²² PJM acknowledges that the Board's concerns about the impact of construction delays of the Susquehanna-Roseland transmission line on reliability are not misplaced. According to PJM:

The Board need not draw the extreme conclusion that brownouts absolutely will occur and will do so frequently. However, the Board has drawn the right conclusion that the risk of brownouts, while not imminent, is increasing and additional costs New Jersey will face in the form of transmission congestion and reliability must run (RMR) payments will result from the construction delay.²³

PJM reliability analysis showed that for 2012 and 2013, without the S-R line in service, there were five common mode outage violations. PJM looked first to transmission upgrades to solve the potential future reliability criteria violations. Finding none, PJM determined that requiring Hudson 1 to remain in service would help mitigate the forecasted reliability criteria violations. PJM has thus called for the continued operation of Hudson 1 even though that plant, if offered, would not likely clear the RPM auction absent the RMR contract. In addition to the \$59.0 million in estimated costs associated with the RMR agreement with Hudson 1, PJM calculated approximately \$160 million in additional congestion costs in 2012 and an additional \$280 million of congestion costs in

²³ <u>Id</u>. at 5.

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²² Comments of PJM Interconnection, LLC, June 17, 2011, p. 1.

2013. In addition to out-of-economic-order dispatch, as a final resort, emergency procedures, including emergency Demand Response, voltage reduction, and non-voluntary load shedding may be instituted. Thus, PJM and FERC's reliance on transmission lines and RMR contracts to address reliability concerns has burdened New Jersey ratepayers with hundreds of millions of dollars in potential additional costs due to the transmission owner's failure to complete construction by 2012.

Moreover, PJM has not told us what will happen if the line is not in-service by 2013, other than the possibility that Hudson 1 could be extended further. At the hearing Commissioner Fiordaliso asked the witness from PJM whether the S-R Line construction delay situation was serious, and was told that Northern New Jersey's margin to react to unforeseen events is "slowly eroding" but "we believe we will be able to manage it." Commissioner Fiordaliso then asked whether, if the economy recovers and demand increases, "would demand response be able to keep up with that increase in demand consumption until Susquehanna-Roseland is built?" PJM witness Kormos responded that "We have not done the analysis into the future years, 14 and 15. I think for 2012 and 2013 we feel perfectly comfortable resources are there and we can manage it." T50:21 – 52:7.

Thus, the assurances that the current system will ensure continued reliability in New Jersey rely heavily on the assumption that the Susquehanna-Roseland line will be operational by 2014. It is not clear that this is a fair assumption. Presumably, if the Susquehanna – Roseland transmission line is not completed as scheduled, Northern New Jersey could face serious shortages. The time to address this problem is now, rather than later, when New Jersey's margin to react to unforeseen events will have "eroded" further.

c. Short-term price signals and interconnection costs and delays create additional barriers to entry.

There was testimony at the hearing and in comments that the two major barriers to entry in the PJM markets were the interconnection process and the lack of a long term price signal. As discussed in Rate Counsel's initial comments and as noted by more than one commenter in this proceeding, RPM's failure to support the construction of new generation serving New Jersey load stems primarily from the lack of long-term revenue certainty. Specifically, the current RPM auction structure, in which prices are set for one year three years in advance, does not provide the level of revenue certainty necessary for the developer of generation to secure long-term financing or to commit the significant resources needed to build a multi-million dollar construction project.

According to Mr. Remillard of CPV:

Simply put the single largest obstacle to the investment in and construction of new, capital intensive, merchant generation projects is the inability of the current wholesale capacity market design to provide a stable long term revenue stream. In fact, it is RPM's failure to achieve its objective of encouraging development of new baseload resources that is of paramount importance here, and indeed that has led certain states to consider alternative means of reaching this objective.²⁴

John Schultz, the Vice President for Energy Operations for Hess Corporation agreed with this assessment, stating:

The RPM is designed to yield a single year capacity price set three years in advance. In my opinion, this is not sufficient justification for most developers to spend the hundreds of millions of dollars required to build a new generating station that has a useful life of 20-30 years. It is certainly not sufficient for potential lenders to those projects, particularly given the volatility of RPM clearing prices. New Jersey capacity prices have varied between \$110 MW/day and \$245 MW/day over the seven RPM annual auctions. For would-be developers of new generation, such a volatile and short term price signal is insufficient to make the necessary investment.

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²⁴ Comments of Competitive Power Ventures, Inc., June 17, 2011, p. 1.

In sum, the absence of long-term fixed price contracts, PJM market price volatility, and the short term nature of RPM, all contribute to the inability to obtain financing that has become an almost insurmountable obstacle to the construction of new generation to serve New Jersey.

A second obstacle to the development of new generation in New Jersey is the PJM interconnection process. According to Mr. Schultz, the PJM interconnection process, rather than provide developers with increasing certainty on their interconnection timeline and costs, is in fact "an extremely slow process with unpredictable and exorbitant upgrade costs."25 Mr. Schultz recommended several specific steps that PJM could take to address interconnection problems. NRG also cited to interconnection queue delays as an obstacle to bringing new generation on-line. PJM acknowledged that the current FERC-approved interconnection study process creates "a measure of uncertainty and inefficiency" and accordingly PJM has committed to initiate "a stakeholder process to address potential changes in the process and to consider the balance of financial risks between interconnecting customers and system load."26 PJM also encourages New Jersey "to consider whether any New Jersey policies influence nonviable projects to remain in the queue."²⁷ Rate Counsel supports the proposed reform of the PJM interconnection process and recommends that PJM continue to work with all interested parties to reduce the certainty associated with the interconnection timeline and costs.

²⁵ Hess Comments, p. 2.

²⁶ PJM Comments, p. 25-26.

²⁷ <u>Id</u>.

Finally, as discussed at length in Rate Counsel's initial comments, an additional obstacle to the development of new generating plant is the position of the incumbent generators. It is against the self-interest of incumbent generators to develop new generation (or for their affiliates to develop new transmission) when to do so would be to cut the revenue stream for the generator's existing plant. The large incumbent generation companies in PJM have the balance sheet strength and capital access to undertake major power plant projects. These large incumbent generation companies also have control over the existing generation sites which may be the best sites for expanding capacity and which are not available to competitors. Ironically, those with the abundant cash flow, strong corporate balance sheets, access to economical capital and control over the best sites may have the strongest economic disincentive to add capacity to the market (particularly baseload-type capacity) because doing so would have the effect of moderating supply prices and therefore revenue streams for their existing generation portfolio in the region. Therefore, their profit maximizing strategy is not to build, and even to retire existing capacity that is marginal. These mixed motivations reinforce the barriers to entry created by RPM's short-term price signals and interconnection obstacles.

4. Conclusion

In sum, it is important that all parties to this process are willing and able to honestly assess whether the current system is working. New Jersey cannot blindly rely on the PJM short term capacity markets or on coal power from Pennsylvania brought across the proposed Susquehanna – Roseland transmission line. New Jersey ratepayers are the ones who will suffer from rolling blackouts, from a stagnant economy and from high energy prices. New Jersey has the authority to protect its citizens and to foster a

resource mix that will ensure the lights stay on at a reasonable cost. Accordingly, Rate

Counsel urges the Board to continue to pursue the LCAPP process. The Board could file

with FERC for an exception to the minimum price rule or further investigate self-supply.

The Board could explore the steps necessary to unbundle the BGS product as a step

toward this self supply option. The State could consider alternative financing

mechanisms. And finally, Rate Counsel urges the Board to invoke its authority to look at
these markets from the supply side and to examine the competitiveness of these markets.