

H-P Energy Resources LLC

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February 14, 2012

Via Electronic Mail

New Jersey Board of Public Utilities
attn: Office of the Secretary
44 South Clinton Avenue
Trenton, New Jersey 08625

Re: Capacity and Transmission Investigation
Docket No. EO11050309

Dear New Jersey Board of Public Utilities:

With the release on February 1, 2012, of the "Planning Period Parameters" for the upcoming Base Residual Auction (BRA) to be conducted by PJM Interconnection, L.L.C. (PJM),¹ and environmental announcements, H-P Energy Resources LLC (H-P) is updating the comments it submitted to the New Jersey Board of Public Utilities (Board or BPU) on October 31, 2011.

H-P also attaches the "Statement of Nora Mead Brownell" providing information about the role of merchant transmission in the Reliability Pricing Model (RPM), why the Board is in a unique position with regard to merchant transmission projects (a.k.a. Qualifying Transmission Upgrades or QTUs) that can help relieve New Jersey transmission constraints, and why the Board's oversight of Public Service Electric and Gas Company (PSEG) with regard to these QTUs could provide large savings to customers at no risk or cost to customers and no burden on PSEG.

As discussed herein, the PJM planning parameters indicate that if the BPU promptly directs PSEG to act in the best interests of its customers that its customers could save an estimated \$111.6 million in the upcoming BRA through partial relief of the PS North Locational Deliverability Area (LDA), or an estimated \$203.6 million through partial relief of the PS LDA.² Remarkably, there is no risk or cost to customers or PSEG from creating the opportunity for these customer savings.

¹ The 2015-2016 BRA "Planning Period Parameters" are available here, <http://pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/2015-2016-planning-period-parameters.ashx>.

² These estimates of potential customer savings are substantiated below. The projects have a total capital cost of \$6.7 million, also substantiated below.

Most importantly, the planning parameters show that the Cedar Grove F-Clifton K 230 kV line has remained the “limiting facility” for the PS North and PS LDAs. That necessarily means that upgrading that line will increase Capacity Emergency Transfer Limits into the PS North and PS LDAs, and thereby reduce the cost of capacity in those LDAs if those LDAs are constrained in the upcoming BRA.

It appears likely that one or both of those LDAs will be constrained in the upcoming BRA. Although the Capacity Emergency Transfer Limit (CETL)/Capacity Emergency Transfer Objective (CETO) balances have improved from the last BRA to the upcoming BRA (net 618 MW improvement for the PS North LDA and net 851 MW improvement for the PS LDA),³ it appears likely that generator retirements and relatively high price supply offers due to federal and state environmental regulations will more than offset those improvements.

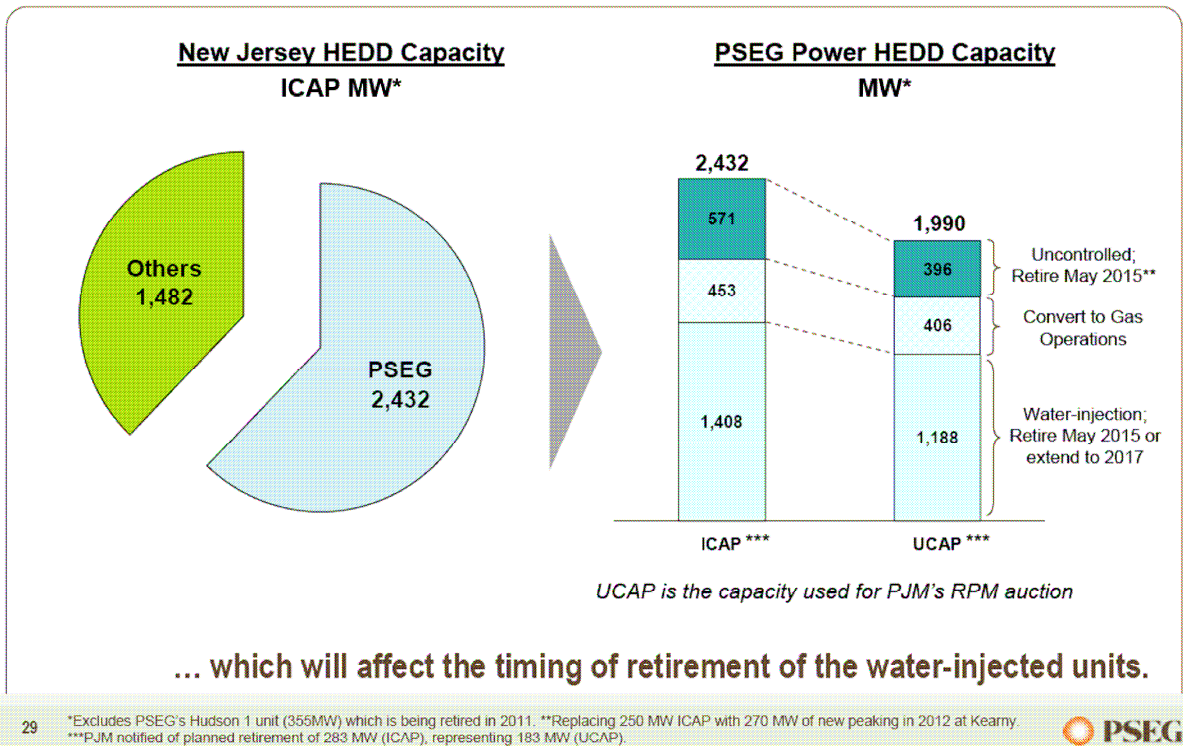
Most significant is the effectiveness of the High Electric Demand Day (HEDD) rule for New Jersey generating units. It appears that HEDD units cannot be capacity resources because they cannot operate during peak hours.⁴ The generating affiliate of PSEG has 1,990 MW of such units that are included in PJM’s modeling (i.e., the CETO).⁵ These units are shown in the following PSEG slide in a presentation to Wall Street:⁶

³ The net changes in CETL/CETO balances are calculated by comparing the 2015-2016 planning parameters, *supra*, with the 2014-2015 planning parameters available here, <http://pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/rpm-planning-parameters-2014-2015.ashx>. Increase in CETL is an improvement and decrease in CETO is an improvement; the improvements are netted.

⁴ The PJM Independent Market Monitor states that: “The MMU’s view is that units that cannot operate on high electric demand days cannot be a PJM Capacity Resource because they cannot perform on days when capacity will be needed.” http://www.monitoringanalytics.com/reports/Market_Messages/Messages/IMM_FAQ_on_ACR_Data_and_NJ_HEDD_Rules_20111118.pdf, Answer 1.

⁵ PJM appears to assume that all these MWs continue in service for purposes of the CETO, because there has been no change in the PS North LDA and PS LDA generator resource lists from the last BRA to the upcoming BRA. Compare the 2014-2015 PJM Resource Model available here, <http://pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/2014-2015-rpm-resource-model.ashx>, and the 2015-2016 PJM Resource Model available here, <http://pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/2015-2016-rpm-resource-model.ashx>. Even the units for which PJM has been given notice of retirement (deactivation), Bergen 3, Burlington 8, National Park 1, Mercer 3, and Sewaren 6, available here, <http://pjm.com/~media/planning/gen-retire/pending-deactivation-requests.ashx>, are included in the PJM Resource Model for the upcoming BRA.

⁶ The PSEG slide is part of a presentation available here, <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NDUwOTk2fENoaWxkSUQ9NDc1OTQzfFR5cGU9MQ==&t=1> slide 29.



Because the HEDD rule is not being extended,⁷ all these units can be expected to retire or be converted to natural gas at high capital costs to be reflected in supply offers as “Project Investment.”⁸ Retirements and/or relatively high supply offers by this quantity of generation appear likely to boost PS North and/or PS LDA clearing prices to higher levels.

When PS North and PS LDA prices are at higher levels (above \$200/MW-day), past BRAs suggest there is little if any uncleared supply;⁹ this, in turn, is tantamount to a vertical supply curve.¹⁰ With a vertical supply curve each MW of

⁷ See the new story covering this announcement here, http://www.northjersey.com/news/138994964_Christie_rejects_a_bid_to_delay_new_ozone_limits.html?c=y&page=1.

⁸ See, generally, the questions and answers of the PJM Independent Market Monitor available here, http://www.monitoringanalytics.com/Tools/docs/RPM-ACR_FAQ_RPM_Must_Offer_Obligation_20120203.pdf.

⁹ This is shown in the Base Residual Auction Reports for the last three BRAs, available here, <http://www.pjm.com/markets-and-operations/rpm/rpm-auction-user-info.aspx#Item06>.

¹⁰ When there are insufficient sell offers to intersect with the demand (Variable Resource Requirement) curve, the clearing price is set by extending the supply curve vertically from its end point until it intersects the demand curve. See PJM Manual 18, *PJM Capacity Market*, Section 5.6.2, available here, <http://pjm.com/~media/documents/manuals/m18.ashx>.

CETL increase would reduce the clearing price in the PS North LDA by \$1.144/MW-day.¹¹ The estimated CETL increase from these projects in the upcoming BRA is 70 MW, which would mean a clearing price reduction of \$80.10/MW-day. This price reduction on 3,817.5 MW¹² of resources paid the PS North clearing price would equate to customer savings of \$111,610,330 (\$80.10/MW-day times 3,817.5 MW times 365 days).

A similar analysis for the PS LDA with an estimated 130 MW of CETL increase from the projects shows customer savings of \$203,556,410 (\$73.55/MW-day times 7,583.0 MW times 365 days). Data from the PSEG slide above, along with the CETL and total resources offered in the last BRA, indicate that this is a realistic scenario for the PS LDA.

Specifically, the PS LDA CETL in the upcoming BRA is 6,192.0 MW,¹³ total resources offered (not just cleared) in the last BRA were 8,138.8 MW,¹⁴ for total

¹¹ This ratio is a function of the Variable Resource Requirement curve between points “(b)” and “(c)” in the Planning Period Parameters available here, <http://www.pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/2015-2016-planning-period-parameters.ashx>. There would be less reduction in the clearing price to the extent the supply curve is less vertical.

¹² The quantity of resources paid the PS North clearing price is based on the results of the last BRA available here under “Total Resources Cleared,” <http://www.pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/20110513-2014-2015-base-residual-auction-results.ashx>. The quantity in the upcoming BRA may vary by a small amount.

¹³ The CETL is shown in the 2015-2016 Planning Period Parameters, *supra*.

¹⁴ Total resources offered in the last BRA appear to be a reasonable proxy for total resources to be offered in the upcoming BRA. The three Long-Term Capacity Agreement Pilot Program (LCAPP) projects selected by the Board in its March 29, 2011 order available here, <http://www.state.nj.us/bpu/pdf/energy/LCAPPbo.pdf>, are not included in this scenario for the following reasons (putting aside litigation and regulatory risks). The Hess Newark, LLC project has a first in-service year of 2016-2017. The Old Bridge Clean Energy Center project is not located in the PS or PS North LDA. The Woodbridge Energy Center appears to be PJM Queue W4-009 and could interconnect in the PS (or PS North) LDA at the Metuchen substation, but the feasibility study dated October 2011, available here, http://www.pjm.com/pub/planning/project-queues/feas_docs/w4009_fea.pdf, indicates overloads of one 500 kV line and twelve 230 kV lines which would take years to address from the date of a final Interconnection Construction Service Agreement (ICSA) which, in turn may take years from the date of the October 2011 feasibility study (for example, the West Deptford project, PJM Queue Q90, took five years from the feasibility study in 2006 to the ICSA in 2011 (the feasibility study and ICSA are available here, http://www.pjm.com/pub/planning/project-queues/feas_docs/q90_fea.pdf, and here, http://www.pjm.com/pub/planning/project-queues/csa/q90_csa.pdf, respectively).

With regard to the possibility of significant additional demand resources offering in the PS LDA in the upcoming BRA, that does not appear likely. Total offered demand resources only increased 2%, or 20.9 MW, from the last BRA to the one before that, <http://www.pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/20110513-2014-15-base-residual-auction-report.ashx>, slide 6, suggesting that demand resources in the PS LDA have leveled off.

internal and external available resources of 14,330.8 MW. The PSEG slide indicates gross retirement of 1,584 MW of HEDD units, offset by 270 MW of new peaking capacity at Kearny, for net PSEG retirements of 1,314 MW. There appear to be an additional 590.3 MW of non-PSEG owned HEDD units in the PS and PS North LDAs.¹⁵ If those non-PSEG units retire/convert in the same percentage as the PSEG units, then 389.6 MWs retire. Total HEDD-related retirements in the PS LDA would total 1,703.6 MW (net PSEG retirements of 1,314 MW and non-PSEG retirements of 389.6 MW). This would leave total internal and external available supply in the PS LDA of 12,627.2 MW (14,330.8 MW minus 1,703.6 MW), and this would be the point at which the supply curve would become vertical to intersect the demand curve at a clearing price of \$312.31/MW-day.¹⁶

As stated before, under this scenario the projects would save customers \$203,556,410. The projects have a total capital cost of \$6,740,000.¹⁷

H-P also updates the Board on the progress, or lack thereof, of these projects in the interconnection process. These projects were submitted to PJM soon after the last BRA to allow maximum time to become eligible as QTUs in the upcoming BRA. The feasibility study for the projects was, as stated in PJM meeting minutes dated July 8, 2011, “to be issued by October 31, 2011, per Tariff.”

Instead, nothing has happened except for a series of boilerplate delay notices.

The RPM rules require an executed Facilities Study Agreement (FSA) by March 23, 2012, in order for a QTU to participate in the upcoming BRA.¹⁸ An executable FSA normally accompanies an impact study. Consequently, given the delays thus far, BRA participation requires PSEG and PJM to provide a combined feasibility/impact study and accompanying FSA before March 23, 2012, so that the FSA can be executed and returned to PJM by that date.

¹⁵ Cross-referencing the list available here, http://www.nj.gov/dep/workgroups/docs/apcrule_20110909turbinelist.pdf, with the 2015-2016 PJM Resource Model, *supra*, and excluding the PSEG units.

¹⁶ This is the intersection on the PS LDA demand curve between the “(b)” point at 12,624.5 MW and the “(c)” point at 13,068.3 MW.

¹⁷ These projects were previously studied as upgrades for a generation project, with capital costs set forth in the feasibility study available here, http://www.pjm.com/pub/planning/project-queues/feas_docs/t107_fea.pdf, upgrades 9, 12, 13, and 17.

¹⁸ BRA deadlines are available here, <http://www.pjm.com/markets-and-operations/rpm/~media/markets-ops/rpm/rpm-auction-info/communication-regarding-2015-2016-bra-deadlines-for-planned-resources.ashx>.

Needless to say, this will not happen without the Board's intercession. The generator affiliate of PSEG owns the vast bulk of the generation in the PS North and PS LDAs;¹⁹ thus, the overall enterprise stands to lose substantial revenue if these projects clear in the next BRA.

H-P cannot direct PSEG to complete the necessary study so as to trigger the tendering of an FSA. Nor can H-P itself offer the projects into the BRA for the reason set forth in our initial comments.

Consequently, creating the opportunity for customer savings will take the Board's intercession: (1) directing PSEG, in collaboration with PJM, to complete the requisite study before March 23, 2012, so that PJM will tender the requisite FSA before that date; (2) directing PSEG to acquire the projects from H-P; and (3) directing PSEG to offer the projects into the BRA at a small constraint premium²⁰ to ensure that if one or both LDAs are constrained that the projects will provide value to customers.

H-P is prepared to convey the projects to PSEG at no cost to PSEG (H-P will absorb all project development costs to date). H-P's sole compensation would be a small fraction (e.g., 3%) of any customer savings from these projects. If the LDAs are not constrained, with no savings to customers, then there would be no compensation to H-P.

Under this approach there is no risk to customers or PSEG. If the LDAs are not constrained, the projects will not clear and there would be no obligation for PSEG to proceed with the projects.

If one or both of the LDAs are constrained the projects would clear and necessarily would provide customer savings. To fully protect PSEG, H-P suggests that the Board deem the project costs (including any compensation to H-P) prudently incurred and includable to rate base like any other prudently incurred transmission facility capital cost.

Thank you for the opportunity to provide these supplemental comments.

Respectfully submitted,

¹⁹ The generation affiliate of PSEG owns 3,222 MW of the total 3,698 MW in the PS North LDA, and 3,334 MW of the total 3,728 MW in the PS LDA (excluding PS North). Compare the affiliated generation assets available here, <http://pseg.com/family/power/generation.jsp>, with the 2015-2016 PJM Resource Model, *supra*.

²⁰ Constraint premium means the difference between the constrained LDA clearing price and the unconstrained LDA clearing price at which the QTU offers to go forward. A QTU needs to offer at a premium above \$0/MW-day to avoid being treated as a price taker obligated to proceed with a project even if there is no price difference between the two LDAs.

/s/ Robert J. Patrylo
Robert J. Patrylo
Chief Executive Officer

Attachment

cc (w/att): Service List

**BEFORE THE
NEW JERSEY BOARD OF PUBLIC UTILITIES**

Capacity and Transmission Investigation)

Docket No. EO11050309

**STATEMENT OF
NORA MEAD BROWNELL**

Q. Please state your name and background.

A. My name is Nora Mead Brownell. I was nominated by President George W. Bush to the Federal Energy Regulatory Commission (FERC) on April 30, 2001. Confirmed by the United States Senate on May 25, 2001, I served for a term that expired June 30, 2006. My tenure at the FERC reflected a longstanding commitment to fostering competitive markets to serve the public interest. I championed the development of regional transmission organizations (RTOs), such as PJM Interconnection, L.L.C., which now represent the electricity market structure serving two-thirds of the United States.

Prior to the FERC, I served as a member of the Pennsylvania Public Utility Commission (PUC) from 1997 to 2001. During this time at the PUC, I played an active role in the development of electric choice/restructuring in Pennsylvania.

Prior to appointment to the Pennsylvania PUC I was Executive Director of the Regional Performing Arts Center in Philadelphia, an arts and economic development initiative. Previously I served as the Senior Vice President for Meridian Bancorp, Inc.'s Corporate Affairs Unit. Prior to joining Meridian in 1987, I was Deputy Executive Assistant to former Governor Richard Thornburgh.

I also served as President of the National Association of Regulatory Utility Commissioners (NARUC).

I currently serve on a number of corporate boards and am a founding partner of ESPY Energy Solutions, LLC, a consulting group providing strategic planning, marketing, business, regulatory, and technical expertise in the energy space.

Q. What is the purpose of this statement?

A. H-P Energy Resources LLC (H-P) asked me to provide information to this Board about the role of Qualifying Transmission Upgrades (QTUs) in the Reliability Pricing Model (RPM) capacity market, why the Board is in a unique position with regard to QTUs that can help relieve New Jersey transmission constraints, and why the Board's oversight of Public Service Electric and Gas Company (PSEG) with regard to

these QTUs could provide large savings to customers at no risk or cost to customers and no burden on PSEG.

The bottom line of my statement is that the Board has a no-risk opportunity to save New Jersey consumers a great deal of money by seeing that PSEG does what it should do on behalf of its customers.

Q. What are QTUs?

A. QTUs are a form of merchant transmission project. Essentially, a merchant transmission project developer pays for a transmission upgrade and receives financial rights commensurate with the increase in energy and/or capacity transfer capability created by the upgrade.

In the context of RPM this type of merchant transmission project can supplement centrally planned transmission projects by mitigating the specific transmission constraints that increase RPM prices in constrained Locational Deliverability Areas (LDAs). QTUs do this by relieving the most limiting facility into the LDA -- the facility that actually determines how much outside generation can be transferred into the LDA. The amount of transfer capability is termed the Capacity Emergency Transfer Limit (CETL). Relieving the constraint reduces the constrained LDA's price by increasing the transfer capability (CETL) into the LDA -- this benefit goes to consumers in the LDA. The QTU developer receives financial rights equal to the CETL increase.

Q. Why are there QTUs?

A. I believe that the FERC supported a role for merchant transmission in capacity markets because it did not want to be completely dependent upon the central planning process to identify all transmission upgrades that make sense from an economic perspective. The central planning process can work well from a reliability perspective but not necessarily from an economic perspective. The attraction of the QTU construct in RPM is that the developer acts as a kind of backstop to central planning but at no cost or risk to consumers. The developer is compensated if and only if a given QTU relieves an actual constraint, thus saving consumers money and increasing the efficiency of the grid.

Q. Why is it important not to completely depend on central planning to relieve constraints?

A. An important reason not to be completely dependent upon the central planning process for economic upgrades is that PJM itself is not structured to be a market participant. Yet, decisions on economic transmission upgrades are really marketplace decisions just like merchant generation investment decisions.

Moreover, PJM's transmission owners are heavily involved in the transmission planning process in PJM yet are part of integrated utility operations with generation that receives less revenue if prices in constrained LDAs are reduced.

Q. What is your understanding of the specific QTUs under development by H-P?

A. My understanding of the QTUs under development by H-P is that they can increase the CETL in the PS North and PS LDAs. The PS North LDA was constrained in the last RPM Base Residual Auction (BRA), and is automatically modeled by PJM for this BRA. PJM has elected to model the PS LDA because of environmental and transmission system uncertainties. The CETL increases effectively act like new generation in a constrained LDA because they allow more lower cost generation to flow into the constrained LDA.

My understanding is that H-P itself is not in a position to offer these QTUs into the next BRA but is prepared to transfer the QTUs to PSEG for nothing other than a small fraction of any customer savings from the QTUs. Because PSEG need not incur any project costs unless the QTUs actually provide customer savings from the PS North and/or PS LDAs actually being constrained in the BRA, the QTUs present a no-risk opportunity for large customer savings.

Q. What do you believe the Board should do?

A. I believe the Board should direct PSEG to acquire the QTUs on the no-cost basis offered by H-P, direct PSEG to work with PJM to complete the required interconnection study/agreement by the March 23, 2012 deadline for participation in the BRA, and direct PSEG to offer the QTUs into the BRA at a small constraint premium so that the QTUs will clear if they save customers money. The Board should assure PSEG that the project costs are being prudently incurred and includable in rate base like any other transmission asset.

I believe that these actions by the Board would potentially save PSEG customers a large amount of money at no cost or risk to customers, and that PSEG would be fairly compensated and protected for taking this action on behalf of its customers.

Respectfully submitted,

/s/ Nora Mead Brownell

Nora Mead Brownell

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February 10, 2012