

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**Capacity Markets in Regions with Organized  
Electric Markets**

**Docket No. AD08-4-000**

**ISO New England, Inc.**

**Docket No. ER08-633-000**

**Comments Of Raymond V. DePillo  
On Behalf Of The PSEG Companies**

**(May, 7 2008 Technical Conference)**

Good afternoon. My name is Raymond V. DePillo. I am the Vice-President – Operations and Trading for PSEG Energy Resources & Trade LLC. I appreciate the opportunity to appear before Commission Staff this afternoon to discuss the operation of capacity markets within organized markets on behalf of PSEG Power LLC (“PSEG Power”), PSEG Energy Resources & Trade LLC (“PSEG ER&T”) and Public Service Electric and Gas Company (“PSE&G”) (the “PSEG Companies”).

**I. Introduction**

The PSEG Companies support the capacity market concept for organized markets including the Forward Capacity Market (“FCM”) in ISO-NE and the Reliability Pricing Model (“RPM”) in PJM. When designed properly and administered consistently, forward capacity markets in conjunction with regional transmission planning will ensure the optimal (lowest cost) solution to meet future demand and reliability requirements. The PSEG Companies believe that this construct, coupled with accurate locational energy pricing that includes an

effective scarcity pricing mechanism, will assure generation adequacy at the lowest possible cost to consumers over the long run.

The PSEG Companies have extensive experience with both FCM and RPM and believe that the results to date from capacity auctions are extremely promising and have demonstrated outcomes that are consistent with their design parameters. Critics must recognize that these markets are still maturing and must allow time for their full potential to be realized. Finally, because these market designs are new, we should consider incremental changes that will enhance their ability to realize the intended goals.

## **II. Capacity Market Operations To Date**

Capacity market results to date are encouraging. Large quantities of new entry capacity resources – including significant amounts of demand response resources – were bid into and cleared in both the FCM and RPM auctions. Further, as a result of RPM, many generators have reversed previous retirement decisions and have entered into commitments as capacity resources for periods subsequent to their previously announced retirement dates. Given that it can easily take more than three years from the start of a new capacity development project to commercial operation, these results represent the most economic solution for the transition period. These markets cannot be judged based purely on new entry cleared, but must consider all market responses attained to address future reliability needs.

RPM has already had a direct and very sizable impact on PSEG Power's own capital expenditures for generation. We recently made the decision to

undertake extensive environmental upgrades for our New Jersey based coal plants. The capital costs associated with these upgrades are in excess of \$1 billion. It is not likely that we would have been willing to make these capital commitments if RPM had not been in place. RPM results also justify environmental investments in a large portion of our peaking fleet to meet more stringent emission requirements taking effect in the future, thus ensuring their availability for several more years. Further, PSEG Power has also placed new entry bids for more than 200 MWs into the RPM auction and has significant additional potential projects in the PJM interconnection queue.

Our Sewaren station provides a particularly compelling example of the impact of RPM and the benefits provided to consumers. PSEG Power notified PJM of its intention to retire the Sewaren plants in 2004 because the compensation associated with the plants at the time (pre-RPM) was not sufficient to cover either the out-of-pocket cost of operation or the costs of project investments needed to maintain the reliability of the plants. The condition of the plants at the time the retirement decision was made, in fact, had deteriorated significantly because there had been inadequate revenue from the market for several years to justify expenditures. PJM thereafter advised PSEG Power that it wished to retain the station to meet local reliability requirements resulting in a “reliability must run” tariff for the station whereby it receives its cost of service, including payments for needed project investments, through September 1, 2008.

The revenues received by plants as capacity resources in RPM will be sufficient to cover their normal cost of operations after expiration of the current

“reliability must run” (RMR) arrangement, including the repayment of project investments. PSEG Power has withdrawn its retirement notice for the plants, and the station has now been committed as a capacity resource in PJM through May 31, 2011. Without RPM this would not be case and the plants would be retiring in five months. Sewaren’s avoided cost bids in RPM as an existing unit, moreover, are considerably lower than the Cost of New Entry (“CONE”) thus providing consumers with a very cost-effective capacity resource. Critics who claim that RPM has not affected generation availability or provided concrete benefits to consumers only need to look at our experience to see that those claims are unfounded.

RPM’s success as a market in the early stages of development is especially promising. As designed, prices in RPM were intended over time to reach levels that would oscillate around the CONE. This has in fact already occurred for most of the PJM region. Thus, critics of RPM are condemning RPM for operating exactly as intended. Prices can be expected to rise and fall at times, but on average, prices should cluster around the CONE. RPM should not be criticized because it is working as the modeling predicted.

Another RPM development predicted by the model relates to the fact that price separation between potential locational pricing zones has been decreasing. One of the primary concerns that drove the development of RPM was the concern that particular regions – including New Jersey and Maryland – would suffer from regional shortages of capacity resources. In fact, in the RPM auctions held to date, there has been less price separation than originally

predicted, reflecting both the impact of transmission upgrades and additional resources in the form of new entry, or the retention of retired or aging generating plants as well as demand response. It is significant that after regional separations in the first three interim RPM auctions, transmission upgrades and market responses have addressed the locational reliability concerns, and from 2010 through 2012, almost all of PJM is clearing as a single market.

In addition, the positive impact of RPM and FCM in procuring capacity resources in excess of the minimum level needed for generation adequacy should not be ignored. These additional resources increase reliability, and although often overlooked, also decrease energy costs and energy price volatility. Any thoughtful analysis of capacity markets must also take this impact into account.

**III. As Capacity Markets Progress Beyond the Current Transitional Period They Will Provide Additional Benefits If Allowed To Operate Without Artificial Encumbrances or Out-Of-Market Interference**

As capacity markets progress beyond their transitional stages, consumers can expect to realize additional benefits reflecting the operation of these markets in their mature stages. In PJM, the very first post-transitional RPM auction is ongoing at this time and represents a reasonable opportunity for most developers to offer new generating units due to the lead time required for permitting and construction activities. Because the level of the CONE used for this RPM auction does not appear to accurately reflect current conditions, developers of new entry generating units may submit bids that are too high to clear. This in itself would prove RPM successful: if there is excess supply, as indicated by low clearing

prices, new generation should not clear because the price represents the empirical fact that there is sufficient generation to meet reliability criteria. On the other hand, if RPM prices clear high and no new generation bids are cleared, that would be an indication of a potential flaw in the market. While both RPM and FCM have brought more resources to the table, new generation entry should not be expected until market prices justify those expenditures. It is important to note that developers do not consider RPM clearing prices a guarantee of payments on an annual basis – but if in fact the forward capacity markets are allowed to function as intended, they will provide a certain amount of price stability, which allows investors to be more confident that they will, in the long run, receive an adequate return on their investment.

For markets to achieve a mature state in which the full array of benefits can be realized, care must be taken to prevent the erection of artificial encumbrances or out-of-market interferences that will impede their development. Market participants need to have confidence that markets will be administered in an unbiased manner, that basic design elements will not be modified in ways that change their fundamental characteristics and that out-of-market interventions intended to influence market outcomes will be prevented. If these elements are not present, the ability of capacity markets to achieve their full potential will be hindered.

The potential for out-of-market intervention through state government based programs is a particular concern. The PSEG Companies recognize that the states have legitimate interests in assuring reliability within their jurisdiction

and that they need to proceed in the manner they perceive will provide the greatest benefits to consumers. In the context of organized markets, we believe that the best way to achieve reliability goals at the lowest cost to consumers will be by working with the RTOs and ISOs to create and monitor a transmission planning process that interacts with capacity markets in order to foster the most cost-effective solution to reliability requirements. To the extent that states may decide to participate directly in the market, however, they should also take steps to minimize any potentially adverse impact by giving market participants as much advance notice as possible of their intentions and by limiting their efforts to promote the development of capacity resources truly needed for reliability purposes or environmental goals.

Otherwise, an effort to try to drive down prices, may reduce costs in the short-term, but will stymie future merchant investment. This will, in turn, force the state entities to keep reinvesting in these types of solicitations in an effort to stay ahead of load growth. Ultimately, this will either lead to the “re-ratebasing” of a region as new generators enter into ratepayer backed procurement arrangements, or more extreme price volatility to customers as merchants will be slow to respond to increasing demand. In addition, continual state intervention in the markets through new construction will eliminate downward competitive pressures on new generation investment costs, as the rational behavior would be to wait for the state to intervene and provide whatever revenue is necessary to get the new generation in place.

If capacity markets are allowed to mature without inappropriate interference, significant benefits will be realized. First, developers can be expected to be more willing to construct new generation at lower rates of return. Because market outcomes will be perceived to be rational and reasonably predictable, risk premiums associated with new construction will be minimized. Further, willingness to build more expensive units, such as base load units, can be expected to increase with correct signals from both the capacity and energy markets. Even though PJM CONE levels are based on simple cycle machines, there will be a perception by developers that income streams associated with mature capacity markets will make a significant contribution towards the cost of other, more capital intensive technologies. Capacity markets should achieve greater acceptance by load interests, state agencies and consumer advocates as significant new entry of generation and demand response occurs. When it is recognized that capacity markets are working as designed, they will be viewed as constructive market elements that enhance reliability and provide real benefits to consumers.

With a functioning and stable construct, increased long-term contracting should occur. Load interests and suppliers should both have greater willingness to enter into long-term contracts once it becomes clear that capacity markets will be allowed to develop without interference. This willingness should increase after capacity markets have experienced a full business cycle and market participants have been able to observe how capacity markets react to temporary

oversupply and undersupply situations. PSEG ER&T, for example, after the first FCM auction entered into a capacity transaction that extended through 2017.

#### **IV. Some Enhancements to Capacity Markets Should Be Considered**

Although the PSEG Companies believe that the basic design elements of RPM and FCM are sound, certain enhancements should be considered at this time. These enhancements will generally be best addressed through the ISO/RTO stakeholder processes which, to date, have proved adequate to make the incremental changes necessary to improve these markets.

First, the CONE setting mechanisms for both RPM and FCM appear to require modification. The primary CONE setting mechanism for RPM was intended to be the “empirical CONE” mechanism whereby CONE would change based on the actual experience of the market. In fact, however, the “empirical CONE” has so many restrictions on its applicability that it very rarely will be triggered at all. Further, even if triggered, it adjusts the CONE value so slowly that a significant change of CONE will take much too long to be realized. Setting CONE is critical to market success – if set too low, new development will be slow and the market will be unresponsive to real needs. Setting the CONE too high, although certainly not desirable, may be less problematic because real new investment will force the market back to the appropriate equilibrium point.

Second, the Commission needs to address the interrelationship between the transmission planning process and capacity markets. In PJM, for example, the transmission planning process looks forward up to fifteen years while RPM looks forward about 3 and one-half years. This fundamental inconsistency

between the two time horizons can foster sub-optimal solutions to future reliability needs. PJM has made some improvements in the planning process by considering predicted RPM outcomes in a sensitivity study. However, this is not sufficient and additional enhancements are needed. It may even be necessary to increase the forward procurement period for RPM in order to ameliorate the time-step discrepancy.

Third, enhancements to energy market design must continue. Ineffective scarcity pricing remains a significant shortcoming in organized energy markets. Improvements in this area would result in a more efficient dispatch and reduce the need for generators and demand response providers to rely on capacity market revenues. Further, other efforts designed to improve generation dispatch should continue. The PSEG Companies believe, for example, that PJM's "perfect dispatch" initiative has the potential to bring significant efficiencies to the energy market which, in turn, should also help reduce the need for the support provided by capacity market revenues. It is critical that the well functioning energy and capacity markets work in accordance with the transmission planning process, to ensure that consumers attain the optimal asset solutions to meet reliability requirements.

This concludes my presentation. Thank you for your time. I am available for questions now or at the end of all the presentations.