

Therefore, we would like to take the opportunity to discuss two issues: whether the PJM wholesale market is working and what policies should be advanced through these markets.

Let me state emphatically that the PJM market is working extremely well. First, to be considered a success, the market must achieve reliability. The PJM market clearly has met this criterion. This reliability is facilitated by among other things, access to diverse power sources in over 14 states, a robust planning transmission process and a highly developed process for assuring sufficient capacity reserves. By having an adequate supply of generation and access to diverse supply sources, the region is able to satisfy resource adequacy requirements and provide the necessary ancillary services to support the grid. Ensuring reliability requires ongoing vigilance, and PJM has demonstrated its commitment to this goal.

The next important gauge is whether the PJM market is sending the intended price signals through the implementation of a uniform single clearing price mechanism, known as locational marginal pricing (“LMPs”). Again, the answer is an emphatic yes. These prices are derived from one of two types of bids. First, when the transmission system is unconstrained or a large number of generators can supply power needed to relieve a constraint, generators compete to be dispatched. There is strong pressure to submit a competitive bid in order to be selected to run, recover your operating costs, and earn a return on your capital investment. The other type of bid is a cost based-bid. These types of bids are used whenever generation must be called on because there is a transmission constraint on the system and only a few suppliers can meet the need. They represent the actual costs to run the generator, plus 10%, and are reviewed by the PJM Market

Monitoring Unit for accuracy. Furthermore, demand response resources are able to compete on a comparable basis with generation. The PJM Market Monitoring Unit reviews all bids to ensure this system works.

The ability of PJM to produce locational marginal prices is a result of the enormous advances in computer technology that allows PJM to evaluate hundreds of thousands of input variables to calculate the different costs of producing electricity on each part of the electric system. The differences in the costs have always existed; we just didn't have the tools to calculate them so precisely and quickly in the past. Although there are complaints about prices varying among regions because of these locational marginal pricing signals, in fact, they serve the critical function of identifying production cost differences. No one would expect to buy a house in Altoona or Erie at the same price as a house in Pittsburgh or Philadelphia suburbs. Locational price signals are similar. Because locational costs are now apparent, we now know where it is more or less expensive to serve customers.

Among those who claim that locational price signals lead to artificially high prices, you have heard advocates for a return to a system in which there was little transparency in pricing. Really, it's like saying let's eliminate cell phones because now that we have them, our bosses can bother us over the weekend. But does that really make sense? The cellphone is a valuable tool. Whether or not you choose to return a call is merely a decision about what to do with that tool. Similarly, the locational marginal price signal is just a piece of information that will inform our decisions to consume and to invest. Locational marginal pricing of electricity in the competitive wholesale markets

accurately reflects the lowest costs to the system at any given point in time, consistent with conditions on the interregional transmission grid.

What people do with that locational marginal price signal, however, is another story. And that is where policy, not facts, come into play. This Commission decided to protect retail customers from the five minute fluctuations of the wholesale market. The Commission had to decide whether it wanted customers exposed to volatile real time prices, or whether it should provide stable and predictable prices. PSEG ER&T believes that the Provider of Last Resort Procurement rules that you continue to design and implement, including those implemented to date, are in fact an excellent policy choice for your retail customers. Load serving entities such as my company are responsible for managing our costs in relationship to the PJM prices, and delivering electricity to consumers at fixed rates. There are varying opinions as to the optimal mix of long and short-term arrangements. You have secured contracts for your customers, with varying terms. You have weighed the positives of shorter term contracts – having your customers exposed to real time pricing to induce demand response, versus having stability and longer contracts, knowing that longer contracts can lead to higher costs. Finally, you have ensured the integrity of your process by having independent advisors review the process and the prices produced from it.

Industrial customers and public power entities, however, do not necessarily have the benefit of these types of consumer protections. Instead, they must contract for themselves to achieve the benefits you have designed for your residential customers. A few years back, the PJM markets were producing very low clearing prices, and these types of entities were not interested in long term contracts, because it was easier and less

expensive to buy directly from the PJM spot wholesale market. Many generators, on the other hand, were extremely interested in entering into long term contracts to remain solvent. Some of these companies indeed did enter bankruptcy, but your customers did not feel any of their financial pain. Today these markets signals are significantly higher, so now industrial customers and public power entities say they are willing to enter into long term contracts as a “better deal” but are unwilling to recognize the locational marginal price signals, (which provides the what, where and why for demand response, generation and transmission investment). Their idea of a better deal thus involves “below market” rates which, not surprisingly, market suppliers do not find to be attractive.

There is another policy issue that is bound up with the clearing prices, and that involves what investments are made, where they are made, and why. LMPs are essential in telling developers what type of resource addition is needed and likely to be economic, and in which parts of the region the addition should be sited. If prices are higher in Pennsylvania than in Ohio, it makes economic sense for the developer to build in Pennsylvania rather than in Ohio. Moreover, we live in a particularly challenging environment for these market signals, because to maintain a reliable system, equilibrium of supply and demand exists only with a sufficient margin of reserve. Some people erroneously believe that this margin is “excess”. Markets inherently devalue excess supply. But in the electricity world, this excess is not really excess, but a required supply to meet reliability standards developed years ago. PJM, therefore, revamped its capacity markets to provide the “missing” signal for that capacity, including the reserve capacity, to ensure such supply was there at all times. But again, the capacity market signal is just that – a market signal.

Because people are not investing to the extent that may be desired by the Commission, or are not investing in certain types of plants at this time, does not mean the market signal is wrong. First, RPM clearing prices are based on what would be the cheapest next source of generation to supply the needed capacity. That is why there is more investment in peaking units than say, coal units. Second, there has not been a significant need for new investment until more recently. That said, a number of existing generator owners have reinvested RPM revenues to make their units more efficient or environmentally compliant. Third, there is enormous regulatory risk looming in the immediate future in terms of rules changes in the electric market and changes in environmental regulation associated with climate policy.

In spite of these constraints, we have already seen significant positive impacts from RPM on investment of which the following are illustrative:

- The April 2007 Auction for 2007/08 delivery year cleared 311 megawatts (MW) of new capacity resources (e.g. unit upgrades) and 127 MW of demand response offers.¹
- The July 2007 Auction for 2008/09 delivery year yielded 1,300 megawatts (MW) of new resources, including 536 MW of demand response, plus 2300 MWs of generation added back through the cancellation of retirements or restarting closed plants.² Commenting on this result, Andrew L. Ott, PJM Vice President – Markets stated: “We had 2,300 megawatts come from generators that chose to restart closed plants,

¹ PJM News Release dated April 16, 2007, at p. 1, available at <http://www.pjm.com/contributions/news-releases/2007/20070416-rpm-auction-results.pdf>.

² See PJM News Release dated July 13, 2007, at p. 1, available at <http://www.pjm.com/contributions/news-releases/2007/20070713-2nd-rpm-results.pdf>

withdraw requests to retire plants or postpone retirement. We had new generation enter the auction largely through upgrades to existing units to produce more power. These are the results we intended to see from RPM.”³ The October 2007 Auction for 2009/10 delivery year cleared a total of 893 MW of demand response and was the “first auction in which total supply growth exceeded demand growth.”⁴

- The January 2008 Auction for 2010/11 delivery year produced a net increase in capacity resources of 1500 MWs of generation and demand resources.⁵
- The May 2008 Auction for 2011/12 resulted in a net increase in resources available to PJM of 4,238 megawatts (MW) of new generation and demand response, including 2,333 MW of entirely new generating units, 1,243 MW of new capacity from upgraded existing units; and 662 MW of new demand response.⁶

In fact, PSEG Power has made specific infrastructure decisions on the basis of the RPM price signals as follows:

- Investing in excess of \$1 billion dollars in undertaking extensive environmental upgrades for our New Jersey based coal plants.
- Placing new entry bids for more than 200 MWs into the RPM auction and PSEG Power has significant additional potential projects in the PJM interconnection queue.

³ *Id.*

⁴ See PJM News Release dated October 12, 2007, at p. 1 (quoting Andrew L. Ott, PJM vice president-Markets), available at <http://www.pjm.com/contributions/news-releases/2007/20071012-RPM-auction-results1.pdf>.

⁵ See PJM News Release dated Feb 1, 2008, at p. 1, available at <http://www.pjm.com/contributions/news-releases/2008/20080201-jan-08-rpm-auction-results.pdf>

⁶ See PJM News Release dated May 15, 2008, at p. 1, available at <http://www.pjm.com/contributions/news-releases/2008/20080515-rpm-results-may-2008.pdf>.

- Reversing the decision to retire PSEG Power's Sewaren station plant.

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.

The issue policy makers need to address is whether, and by how much are they willing to allow, or even encourage prices increase to support policy goals in the future. Waste coal plants that Commissioner Christie would like to see built will pay an enormous price to be environmentally compliant. Zero-carbon renewable technologies like wind and solar have costs that are substantially out of the market, that is, they cost far more than revenues coming from the PJM markets. The issue for policy makers is whether to let prices increase significantly to encourage investment in these sources of electricity, or find some other way to get these investments made. We recommend that whatever decision you make, you do it in a way that does not undermine the integrity of the PJM market signals – e.g., through tax credits, loans, renewable portfolio requirements, and other policy instruments. Alternatively, you could achieve many goals through the RPM auction. For example, you could tell PJM you want additional solar power in Pennsylvania. PJM will set aside a certain amount of MWs for solar, with a clearing price that would justify the technology. They will have to include a locational requirement as well. In that way, the customers within the jurisdiction of the state commission that desired the solar power will both pay for and receive the benefits of the policy goal. Another way to achieve your policy goals are for you to create requirements for renewable portfolio standards in your wholesale supply procurements. Every winning supplier would have to demonstrate that a certain amount of the energy they are supplying through any auction is comprised of electricity produced by the desired

technology in the portfolio standards. This, too, would incent investment in facilities other than what is currently the cheapest of all capacity resources – gas peaking plants.

The other issue regulators must address is what are the trade-offs in cost and reliability necessary to achieve policy goals. Wind is an excellent source of carbon-free generation. PSEG ER&T's affiliates are actively developing wind projects. But, wind is an expensive out-of-market resource because at least on-shore wind it is not usually available at peak times and requires very costly transmission to accommodate it when it is available.

In conclusion, we would urge you to deal with the issues frankly and openly. We believe that blaming locational marginal clearing prices for high prices and looking for ways to reduce this price transparency is the wrong policy. You are facing very tough times: rate freezes are being lifted; the need for improved infrastructure is apparent; use of abundant natural resource such as coal in environmentally responsible ways is becoming more difficult and more costly; and there is a growing awareness of the need to deploy more carbon friendly energy resources. All of these challenges are converging at the same time. The reality is, electricity costs are going to go up. We believe that the PJM electric wholesale market is one of the most effective tools you have to deal with these future challenges and help to ensure that electricity prices remain competitive. We look forward to working with you as you grapple with these issues.