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Prepared Comments

To: FERC Technical Conference: Capacity Markets in PJM
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Subject: Addressing the Root Causes of the Capacity Conundrum



Do we need a capacity requirement?

The fundamental reason that PJM has a capacity requirement is that many participants don't trust the energy markets to provide an acceptable level of reliability. There are two primary reasons why this lack of trust is reasonable at this time; first there is not sufficient Demand Side Response in the market and second there is an inadequate transmission system. Sufficient demand side response would allow customers to choose the price level at which they do not want to consume. Sufficient transmission would allow the energy market to work over large areas and would eliminate the need for locational capacity requirements. Capacity markets are an economic inefficiency put into the overall market design to counteract the lack of demand side response. Likewise, Locational Capacity markets are an inefficiency designed to counteract the lack of transmission investment.

The real problem is not that there is not enough generation but rather there is insufficient Demand Side Response and Transmission. Does RPM solve these fundamental problems? No. Quite the contrary, the proposed RPM solution will exacerbate this problem and create a perceived entitlement on the part of generators for capacity payments. This will result in subsidizing one group of asset owners, namely generation owners, at the expense of Demand Side Response providers, transmission developers and Load Serving Entities.

Why does RPM not work well with Demand Side Response?

1. Forward Procurement

- Moving from a seasonal commitment made prior to the summer season to a four year ahead commitment will greatly reduce participation.
- According to the study funded by PJM and conducted by Neenan and Associates load prefers to specify reductions in timeframes of less than one year.
"An objective of the RAM Group was to not discriminate among resources types. The results of the demand resource provider survey clearly indicate that many current demand resource providers would not be able to participate in a CRAM with a three year planning horizon."
- Forward participation is difficult for several reasons including;
 - Difficulty in anticipating future individual peak load levels
 - Difficulty in calculating coincident peak with system peak hours
 - Difficulty in anticipating overall business climate
 - Four year forward procurement does not take advantage of DSR is able to respond to prices in months, not years so siting delay is not an issue

2. Locational component

- Since annually there may or may not be a locational premium uncertainty is increased. If transmission may come into the market in a few years and obviate the need for locational capacity there is less of a need for new DSR in the long term.

3. Disconnects with current expiration dates

- Although the initial RPM auctions are scheduled to go out through 2010 the DSR programs are set to expire in 2007.

4. Improper Active Load Management (ALM) penalty

What generation owner would participate in a market where if they failed one time in the course of the year they would need to pay back twice as much revenue as they received for the entire year? Yet this is exactly the situation we find ourselves in the PJM market where 1 MW of non-compliance on one day will result in a penalty of approximately \$6,400. Capacity market values have been clearing at under \$10 MW-day resulting in revenues of \$3,650. It is not difficult to understand why more customers don't participate in the program.

What does PJM need for a long term solution?

1. A goal driven DSR market. These goals would include a determination of what level of incentives are justified to eliminate the inefficiencies caused by the capacity market.
2. A permanent seat for Demand Side Response in the market. This would result in a transition from programs that only last a few years to a permanent construct that can be relied upon for long term investment.
3. An accurate view of costs and benefits for DSR. If load is paying hundreds of millions of dollars in capacity payments due to inadequate demand side response what is the value of increasing DSR so that the capacity market is no longer needed? In addition, DSR reduces market power concerns; what is the value of less market price intervention?

Where will DSR get you that the capacity market won't?

- DSR will result in a more efficient use of generation resources. Old and inefficient generators that only operate a few hours out of the year will be able to retire as they will be priced above the cost of demand side response to respond during peak hours.
- There will be rational pricing during periods of scarcity with the value of load curtailment setting the price instead of a generator with market power.
- There will be less need for price caps and mitigation as DSR will mitigate the market power of generation owners.
- DSR will provide a market signal for more efficient generation, including base load units, instead of sending a signal peaking units.

Some fallacies about the existing Capacity Construct

Fallacy 1: Prices are either at the deficiency rate or are at zero.

Although academically reasonable it is simply not the case in the PJM market. The vast majority of the years since 1999 the market has been between \$20 per MW-day and \$100 per MW-day in the monthly and forward PJM run markets. As recently as the summer of 2004 with significant generation surpluses the capacity market was clearing above \$60 MW-day. Likewise during times of relative scarcity the market has not sat at the cap very long.

Fallacy 2: Demand Side Response can not participate in PJM's current capacity markets.

There are many barriers for participation that should be addressed including in terms of both penalties and when customers can start participation but they are able to participate in any of the spot or forward markets.

Fallacy 3: The daily market serves no value.

Although less than 2% of capacity is purchased in the day ahead market it does serve as a clearing house for load switching and short and long positions. It offers new generation opportunities to sell and load opportunities to purchase small quantities. It also provides a visible price signal to the market on a more real time basis.

Fallacy 4: Generators need one year of capacity revenues 4 years out to secure financing.

Generation either builds based on a forecast of the revenues over the life of the asset or based on long term contracts. The idea that a generator would bid into the market and based on clearing would decide to go forward and build is simply ridiculous.

Fallacy 5: To determine what transmission upgrades are needed a 4 year commitment is necessary.

Predictive modeling as well as voluntary commitments from generation can aid in determining the appropriate level of transmission upgrades.

Conclusions

The root causes for the capacity market, insufficient demand side response and inadequate transmission development, can be dealt with in a more efficient manner than has been proposed. The EITCC proposal goes a long way towards improving the RPM model by restricting the time frame to one year to allow demand side response to participate more readily. In addition, the EITCC proposal deals very directly with the need for transmission enhancements. However, the EITCC proposal is still the second best option. The best option is to use the existing market modified by changes to transmission planning. Neither the RPM or the EITCC proposal lays out a road map for resolving the conditions that perpetuate the need for a capacity market. To get sufficient demand side response to eliminate the need for a capacity market will require a fundamental shift to a goal centered DSR market with incentives that promote DSR and result in a more efficient overall market design.