Market Monitoring Unit

MMU Response to Mirant Complaint re RPM Auction

PJM Market Monitoring Unit

November 29, 2007

Introduction

Mirant filed a complaint with FERC on November 8, 2007 alleging that the RPM tariff will produce unjust and unreasonable results in the upcoming Third Incremental Auction, unless modified per their suggestion. (See Docket No. EL08-8-000.) The basis for the complaint is the affidavit of Robert Stoddard.

Summary of Mirant's Argument

Mr. Stoddard asserts, among other things, that:

- The Third Incremental Auction will be competitive on the supply side (page 12, lines 12-14);
- The MMU will not analyze the market structure of the Third Incremental Auction (page 12, lines 8-10);
- The Third Incremental Auction will not be competitive on the demand side (page 2, lines 19-21);
- Buyers will know the price at which sellers will offer (page 2, lines 19-21);
- Sellers may have to pay a penalty should their capacity not be available when it is paid to be available (page 7, lines 9-17);
- Therefore the offer cap should be raised from current levels to a level greater than the market clearing price in the associated Base Auction, the Daily Deficiency Rate (page 2, lines 21-23).

Mr. Stoddard's conclusions depend on a series of assumptions. None of the identified central assumptions are correct and Mr. Stoddard's conclusion is not supported.

Response to Mirant's Argument

Mr. Stoddard asserts that the Third Incremental Auction will be competitive on the supply side and that suppliers "will not be able to exert market power to inappropriately influence clearing prices." Based on that assertion, Mr. Stoddard concludes that the cap on offers should be the Daily Deficiency Rate which would permit sellers to "reflect their judgment" of the appropriate offer price.

Mr. Stoddard's assertion that the Third Incremental Auction will be competitive on the supply side is based on two assumptions. The first assumption is that there will be adequate supply from capacity resources which did not clear in the Base Residual

Auction (BRA), from capacity resources with lower EFORd results and from new imports, "depending on the availability of transmission" (page 12, line 18 to page 13, line 3). The second assumption is that there is much better knowledge about market structure in the BRA than in the Incremental Auction (page 13, line 16 to page 14, line 3).

Neither assumption is correct. There is no basis for assuming that there will be adequate supply to support a competitive outcome from capacity resources which did not clear, a known quantity, or from a net improvement in EFORd, which is not known to the market. In addition, given that Mirant resides in a constrained Locational Deliverability Area (LDA), there is no incremental import capability that will emerge between the BRA and the Incremental Auction. The level of knowledge about market structure is comparable between the auctions. The relevant market in the BRA for a constrained LDA cannot be known from "the overall supply/demand balance in the LDA" and depends on at exactly what point the LDA becomes constrained.

More importantly, the adequacy of supply cannot be assumed and the market structure cannot be assumed to be competitive. A rational assumption, given the state of knowledge about RPM markets, would be that the market would not be competitive. However, it is not necessary to assume anything. Ultimately Mr. Stoddard's argument about the market structure assumes that the MMU will not run the TPS test for the incremental auction. The MMU will run that test and determine whether the market is structurally competitive. If the market is competitive, as Mr. Stoddard asserts, there will be no offer caps and Mirant does not have an issue. If it is not competitive, one of Mr. Stoddard's essential arguments fails and his proposed solution fails.

On the demand side, Mr. Stoddard assumes that "buyers will know that some 'free' or very low-priced capacity almost surely must exist" (page 9, lines 22-23). Mr. Stoddard concludes that "the logical use of this information would be for Buyers to lower the price of the Buy Bids strategically to attempt to secure capacity at or near the ACR" (page 10, lines 4-5).

Mr. Stoddard's assumptions are not based on any facts about the market in which Mirant is located or RPM markets generally and are not reasonable. Buyers face the certainty that they will have to pay the penalty rate if they do not purchase the capacity they require. There is also substantial uncertainty about the quantities that may be offered into the Incremental Auction, as Mr. Stoddard argues forcefully (page 13, line 16 to page 14, line 2). There is no information about whether changes in EFORd across relevant units resulted in a net increase or decrease in capacity. As a result Buyers do not know whether demand exceeds supply. Buyers also know that the MW that did not clear in the BRA were offered at high prices and that those prices can be reasonably expected to be just as high in the Incremental Auction, as they are based on units' ACR data. (See the presentation by Joseph Bowring to the RPMWG, dated August 14, 2007, attached to Mirant's Complaint.) As a result, it would not be "logical" for buyers to risk paying the penalty rate by making low strategic bids.

Again, more importantly, the market structure on the demand side cannot be assumed to be non-competitive. It is not necessary to assume anything. Ultimately Mr. Stoddard's argument about the demand-side market structure assumes that the MMU will not evaluate market power by buyers. The MMU will do an explicit evaluation of the market structure of buyers and of their behavior. If the MMU detects the exercise of market power by buyers, the MMU will request that FERC review the matter and make a decision. If there is no exercise of market power on the demand side, Mr. Stoddard's argument is not supported and his solution is not required.

Mr. Stoddard states that load would not be hurt by high prices, but only other sellers (page 2, line 31 to page 3, line 2). Mr. Stoddard relies on this argument to support his position that offer caps should be raised in the Incremental Auction. It is the responsibility of PJM and the MMU to ensure a competitive outcome in all markets and in all RPM auctions. The identity of those who could be hurt is not relevant. Mr. Stoddard has made no claims about whether the purchasers of capacity have the authority to pass higher costs through to ratepayers.

A final piece of Mirant's Complaint is that market participants "cannot hold any additional UCAP as a physical hedge against Delivery Year penalties in case of a rating test failure, or an unplanned outage" (Complaint, page 16). Mr. Stoddard repeats this argument, asserting that sellers are not permitted to reserve some capacity as replacement capacity (page 11, lines 11-13). In other words, a central feature of the Mirant Complaint is about the must offer feature of the RPM auctions.

Again, this must offer requirement and the associated inability to withhold capacity as a physical hedge is also true of each auction including the BRA and does not distinguish the Incremental Auction. The RPM market is, pursuant to reliability standards, designed to procure capacity equal to peak load plus a reserve margin. RPM uses a market mechanism to determine the appropriate locational price for such capacity, including a reserve margin. RPM includes a must offer requirement for capacity in order to ensure that all capacity participates in the market and that the market outcomes reflect the participation of all capacity. The market outcomes also reflect the participation of all demand.

Ultimately, the Mirant Complaint is about the must offer requirement. The must offer requirement was incorporated in RPM in order to ensure that market power is not exercised and in order to ensure that a market can work to establish a competitive price for capacity. If all capacity owners were permitted to hold back capacity as a "physical hedge" against performance issues, that would be equivalent to creating an additional, super reserve margin. The result, given market supply and demand, would be higher prices, apparently even higher risk based on Mirant's arguments and the requirement to hold back even more capacity. Clearly, the must offer requirement prevents this dynamic from occurring and ensures market-based prices for capacity.

Mirant's proposal to permit offers up to the approximately $420 per MW-day Deficiency Rate, in the absence of any support for that as a competitive offer, is a rationale for economic withholding as a substitute for physical withholding. The Deficiency Rate is not a competitive offer in the Incremental Auction and neither Mirant nor Mr. Stoddard has made that claim.

Mirant's Proposed Opportunity Cost Solution

Mr. Stoddard appears to misunderstand the role that the Opportunity Cost construct plays in the RPM market. Mr. Stoddard's modification to the Opportunity Cost language in the RPM tariff would constitute a fundamental change to the RPM.

The Opportunity Cost construct in the RPM market covers capacity exports only. This construct permits sellers who have an opportunity to sell capacity in an external market to submit an offer based on actual or reasonably expected prices in the external market. If the clearing price in the RPM auction exceeds the opportunity cost, the capacity is sold as PJM capacity and if the reverse is true, the capacity does not clear in the RPM auction. The Opportunity Cost construct in RPM was designed so that external market prices could be reflected in RPM offers to the extent that a real opportunity exists to sell capacity into an external market. This provides a capacity market price equilibrating mechanism at the margin. This is consistent with the other market power mitigation provisions of the RPM tariff and consistent with competitive market outcomes across capacity markets.

Mr. Stoddard also incorrectly assesses the opportunity costs facing suppliers when exporting is not an option in RPM generally as well as in the Incremental Auction. Mr. Stoddard notes that suppliers face penalties if they do not provide the capacity that they are paid to provide. This is a performance penalty. The penalties are part of the RPM structure and face suppliers in every RPM auction. For example, if a supplier clears 100 MW in the BRA, the risk of nonperformance is exactly as Mr. Stoddard identifies for the Incremental Auction. Mr. Stoddard's argument proves too much. It supports offer caps in the BRA based on the penalty level in all the RPM auctions. This indicates a flaw in the argument and it indicates that Mirant's Complaint could result in much more fundamental changes to RPM than it now requests.

Even accepting the rest of Mr. Stoddard's logic, the risk to any seller of capacity in any RPM auction is not the Deficiency Rate per MW. The risk is a function of the probability of a performance penalty, the probability of that penalty occurring for multiple hours across days and months, and the actual MW level of a performance issue in any hour where there is an issue. This conclusion is further corroborated by Mr. Stoddard's conclusion that "competitive pressures will drive the price down to reflect the market value of risk" (page 11, lines 19-20).

In fact, a supplier would only have to pay a penalty if it could not replace its capacity via a bilateral transaction. The price of the bilateral transaction will be a function of market forces. If the market is very tight, the price will be higher and if there is excess supply, the price will be lower. Thus, if Mr. Stoddard is correct and the supply side is competitive, a supplier who anticipates failing a performance test can purchase capacity to address the issue. Mr. Stoddard is not correct when he asserts that the "value" of capacity equals the Deficiency Rate (page 10, lines 9-14). The value of capacity is determined by the market outcomes.

If there is competition, as Mr. Stoddard recognizes, suppliers will not price at the Deficiency Rate (page 10, lines 16-18; page 11, lines 19-20). So, the only time that the Deficiency Rate is relevant is when the market is not competitive. Apparently, Mr. Stoddard would design a market that assures that the competitive price is equal to the Deficiency Rate. This is a fundamental point. Mr. Stoddard would set the offer cap at a level which he agrees exceeds the competitive level. That is inconsistent with the basic design of the RPM auction and with the market power mitigation features of that auction design where offer caps are designed to equal competitive offers.

Thus, Mr. Stoddard has not established that the Deficiency Rate is relevant. Mr. Stoddard has not established, or in fact suggested, a competitive offer price for owners with market power in the Incremental Auction.

The issue is not whether the definition of a competitive offer should be based on administrative penalties. The issue is whether the penalties should be based on market outcomes. If the competitive market resulted in a low price, the market establishes the value and the penalty for nonperformance should therefore also be low. If the competitive market results in a high price, the market-based penalty should also be high. As Mr. Stoddard recognizes, the value of capacity is based on the market outcomes and not on the level of the administrative penalty.

Finally, the total market price of capacity already includes compensation for performance issues.

Issue

When the faulty assumptions about the competitiveness of the supply side and demand side of the market are removed and assumptions about participant behavior are removed, there is still a question remaining. That question is whether the competitive market outcome in the Incremental Auction could be a low or zero price. This could occur only if there is new capacity in the Incremental Auction that exceeds the demand in the Incremental Auction. Looking at the supply curve in the Bowring presentation, the incremental supply from existing offers is all at prices in excess of the clearing price. (See the presentation by Joseph Bowring to the RPMWG, dated August 14, 2007, attached to Mirant's Complaint.) In that case, there is no issue. If and only if the MW of low price supply exceed the MW of demand, the price will be set by the supply curve. A low or zero price could result if the offers are at a low or zero price. This is a low probability event, but it is logically possible.[1]

Based on Mr. Stoddard's statements, the only logical source of such an increase in low price capacity is from units with lower EFORd levels and therefore increased UCAP MW in the Incremental Auction compared to the offers of such units in the BRA. Such an improvement in EFORd levels and a corresponding increase in available capacity would not be a surprise to the owners of capacity offered into the 2008/2009 BRA. The BRA auction for 2008/2009 was run in July 2007. The forced outage experience of units was therefore known to owners through June 2007. The Incremental Auction requires the use of EFORd data for the 12 months ended September 30, 2007. Thus, EFORd information for required Incremental Auction offers existed for capacity owners for nine of twelve months. The owners of that capacity could reasonably have offered a lower EFORd into the BRA in order to reflect the actual year to date experience if it was warranted. If owners had done that, there would not be a substantial increase in offered low price MW and the indicated market condition would not occur. In addition, the clearing price in the BRA would have been lower as a result of increased low price supply if owners had made offers based on their knowledge about changes in EFORd for the Incremental Auction.

To modify the offer price cap in the Incremental Auction to the unsupported and extremely high level suggested by Mirant would be to provide a strong and inappropriate incentive to withhold from the BRA. To do so after the fact would also penalize those market participants who behaved consistent with the logic described.

Finally, it should be noted that, in the event that the supply of low price offers exceeds the demand in the Incremental Auction (the only condition under which a potential issue arises) that suppliers would have a physical hedge, precisely because the MW of supply exceed the demand.

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[1] Note that, contrary to Mr. Stoddard's assertion, if unit owners made a tactical error by being price takers in the BRA, that was their choice based on the market rules but it can be modified for the Incremental Auction. There are no rules preventing a capacity owner, who chose not to submit ACR data in the BRA from submitting ACR data in the Incremental Auction.

Proposed Solution to Mirant's Issue

Regarding the competitiveness of the supply side of the market, the MMU will run the TPS test for the Incremental Auction, pursuant to and as defined in the tariff, and determine whether the market is structurally competitive. If the market is competitive, as Mr. Stoddard asserts, there will be no offer caps and Mirant does not have an issue. If the market is not competitive, one of Mr. Stoddard's essential assumptions fails and his proposed solution fails.

Regarding the competitiveness of the demand side of the market, Mirant's issue is that buyers may exercise market power and inappropriately influence clearing prices such that prices are below the competitive level. While the probability of this appears quite small, it is part of the MMU's responsibility to ensure that market power is not exercised in any of the PJM markets by any market participant. The MMU will do an explicit evaluation of the market structure of buyers and of their behavior. If the MMU detects the exercise of market power by buyers, PJM could postpone posting the auction results and the MMU could request that FERC review the MMU analysis and proposed solutions. FERC could then decide how to proceed to ensure a competitive outcome.

More generally, the PJM stakeholder process should also revisit the issue to determine whether an explicit market power test for the Incremental Auctions related to market power on the buyer side is appropriate. The PJM stakeholder process should also revisit the question of establishing penalties that are explicitly derived from market prices. These are changes that should be carefully considered by stakeholders and by the Commission.

Mr. Stoddard has not made a case that there is an issue or that his proposed solution to that issue is logical or based on reasonable economics. Given that and given that the MMU identifies much more direct solutions to the potential issues identified by Mr. Stoddard, based on the existing tariff, the MMU recommends that the Commission reject Mirant's proposed modification to the RPM tariff. There is no reason for a hasty and poorly conceived solution which will have significant long-term results for the RPM construct.

Nonetheless, if, after the Commission considers all the facts, the Commission determines that the offer cap should be modified for this Incremental Auction pending a stakeholder process, the MMU suggests the following: the clearing price from the BRA could be used as the price of capacity transactions in the Incremental Auction only in the event that the price would otherwise be low or zero.