



DATE: December 21, 2012

TO: PJM RPM Auction Participants

SUBJECT: Frequently Asked Questions on RPM/ACR and RPM Must Offer Obligation

Monitoring Analytics, LLC serves as the Market Monitoring Unit (MMU) for PJM Interconnection, L.L.C. and is also known as the Independent Market Monitor (IMM) for PJM. The following are frequently asked questions and answers related to its role in the PJM Reliability Pricing Model (RPM) Capacity Market.

For questions related to this document, please email rpmacr@monitoringanalytics.com.

RPM/ACR System

Question 1:

What is the RPM/ACR system?

Answer 1:

The RPM/ACR system is an application hosted by Monitoring Analytics, LLC and is used for the submission of data to the MMU by Capacity Market Sellers for purposes of calculating offer caps for RPM Auctions, per PJM Open Access Transmission Tariff (OATT) Attachment DD § 6.7(b). The RPM/ACR system is also used for the communication of PJM Market Net Revenues and offer caps and for the affirmation of offer caps.

Question 2:

Who has to enter data into the RPM/ACR system?

Answer 2:

Any Capacity Market Seller who intends to have a non-zero offer cap for an Existing Generation Capacity Resource should submit data to the MMU via the RPM/ACR system.

Question 3:

How do I get access to the RPM/ACR system?

Answer 3:

Capacity Market Sellers must have an account set up in order to access or submit data in the RPM/ACR system. To register for an account and have a user-level ID set up, the PJM

Customer Account Manager (CAM) must fill out the “RPM-ACR Registration Instructions & Form” document and submit it to rpmacr@monitoringanalytics.com:

http://www.monitoringanalytics.com/tools/docs/RPMACR_Registration_Instructions_and_Form_20090925.doc

Question 4:

What are the RPM/ACR related deadlines?

Answer 4:

Timelines and deadlines for RPM/ACR related tasks for upcoming RPM Auctions can be found on the Monitoring Analytics website’s Tools page:

<http://www.monitoringanalytics.com/tools/tools.shtml>

Question 5:

What Equivalent Demand Forced Outage Rate (EFORd) value should I enter in the RPM/ACR system?

Answer 5:

- For RPM Auctions held prior to the date on which final EFORd values for a Delivery Year are posted, Capacity Market Sellers should enter their expected sell offer EFORd, or for a resource with multiple owners, the Capacity Market Seller assigned to submit the data should enter a single EFORd value that is consistent with the RPM rules. The EFORd value that is used to convert an offer cap to an unforced capacity (UCAP) basis is the actual sell offer EFORd submitted with its offer.
- The RPM rules define that the maximum EFORd that may be used for Base Residual Auctions, First Incremental Auctions, Second Incremental Auctions, and for Conditional Incremental Auctions held prior to the date on which the final EFORd values used for a Delivery Year are posted, is the greater of the five-year average EFORd or the one-year average EFORd for the time period ending September 30 that last precedes the Base Residual Auction, per PJM OATT Attachment DD § 6.6(b).
- The RPM rules provide for Capacity Market Sellers to propose another maximum EFORd value and submit such a request to the MMU no later than 120 days prior to the commencement of the RPM Auction offer period, as defined in PJM OATT Attachment DD § 6.6(b). The MMU notifies the Capacity Market Seller and PJM of its determination on the request for an alternate maximum EFORd no later than 90 days prior to the commencement of the RPM Auction offer period. The Capacity Market

Seller must notify the MMU, with a copy to PJM, whether it agrees with the alternate maximum EFORd determination.

- For Third Incremental Auctions and Conditional Auctions held after the date on which final EFORds for a Delivery Year are posted, the EFORd that may be used in a sell offer is the one-year average EFORd for the time period ending September 30 that last precedes the auction.
- The EFORd values can be viewed on PJM's eRPM application by clicking the "EFORd" tab at the top of the page and then by selecting the relevant Planning Period.

ACR and APIR

Question 6:

What are the RPM offer cap options?

Answer 6:

- An Avoidable Cost Rate (ACR) based offer cap, which is calculated as the ACR less net revenues, where the ACR is either the default or calculated unit specific. The currently defined default ACR values and the template to calculate a unit specific ACR are posted on the Monitoring Analytics website's Tools page:

<http://www.monitoringanalytics.com/tools/tools.shtml>.

PJM Market Net Revenues can be requested by sending an email to RPMNetRevenue@monitoringanalytics.com and specifying the resource(s) and RPM Auction.

- An opportunity cost based offer cap, which is the documented price available to an existing generation resource in a market external to PJM. The Capacity Market Seller must submit this value through the RPM/ACR system and provide a calculation of opportunity cost along with detailed supporting documentation to the MMU.
- An alternative offer cap, as approved by the MMU and filed with FERC for its approval.
- For Third Incremental Auctions, an offer cap option of 1.1 times the Base Residual Auction clearing price for the relevant Locational Deliverability Area (LDA) and Delivery Year is available.

Question 7:

What default Avoidable Cost Rate (ACR) values apply to an RPM Auction?

Answer 7:

The default ACR values, determined pursuant to PJM OATT Attachment DD § 6.7(c), are posted on the Monitoring Analytics website's Tools page:

<http://www.monitoringanalytics.com/tools/tools.shtml>

Question 8:

A: What is the deadline for data submission for purposes of calculating offer caps?

B: What is the process for requesting a waiver of this deadline?

Answer 8:

- A: Data for purposes of calculating offer caps must be submitted no later than 120 days prior to the commencement of the RPM Auction offer period, as defined in OATT Attachment DD § 6.7(a).
- B: Capacity Market Sellers that cannot meet the deadline for data submission for purposes of calculating offer caps due to unforeseen circumstances must file a request for an exception with FERC.

Question 9:

What time period should be used for ACR data?

Answer 9:

As defined in OATT Attachment DD § 6.8(a), ACR data should be based on the twelve months preceding the month in which the data must be provided. In addition, OATT Attachment DD § 6.7(d) provides for estimating the data for such time period based on the most recent data available, and providing to the MMU an explanation of and basis for the estimate. For example, if data for the prior calendar year are not available at the time of the data submission deadline for the Base Residual Auction, an acceptable basis for the time period is the twelve months ending the November 30 preceding the auction.

Question 10:

What information must be provided to the MMU in order to include an Avoidable Project Investment Recovery Rate (APIR) component in the ACR calculation?

Answer 10:

Pursuant to OATT Attachment DD § 6.8(a), a Capacity Market Seller including Project Investment (PI) in the calculation of a resource's ACR must provide the MMU with information supporting such Project Investment and CRF election, including but not limited to, the following:

- Age of the unit.

- Amount of the Project Investment. This includes providing detailed support for the level of Project Investment to the MMU. This can be in the form of an engineering evaluation of cost, budgeted costs determined by means of an internal capital approval process, or other equivalent supporting documentation for the level of investment.
- Purpose of the investment.
- Evidence of corporate commitment (e.g., an SEC filing, a press release, or a letter from a duly authorized corporate officer indicating intent to make such investment).
- Detailed information concerning the governmental requirement, if applicable. In the case of resources affected by the NJ HEDD requirements, this would include the 2015 HEDD Emission Limit Achievement Plan or any successor equivalent applicable to the unit.
- An indication of the timing of the project completion must be provided to the MMU. If cleared in the RPM Auction, the project must be completed prior to June 1 of the Delivery Year, with one exception. If the Mandatory Capital Expenditures (CapEx) option was exercised for the project, then the project must be completed prior to the end of the Delivery Year.

In addition, for any resource for which a Project Investment was included in its ACR and which set the Resource Clearing Price, the Capacity Market Seller must provide to the MMU evidence of the actual expenditure of the Project Investment when such information is available.

Question 11:

What constitutes evidence of a corporate approval of and commitment to proceed with the investment?

Answer 11:

The following statement if signed and submitted by a financial officer or executive responsible for generation or markets would suffice:

Based on the best information available at the time of our final offer into the Base Residual Auction (BRA) for the [relevant Delivery Year], the submitted project investments for [name of unit or units] are necessary in order to provide capacity through the [relevant Delivery Year], and the calculated Avoidable Cost Rates and Avoidable Project Investment Recovery Rates for [name of unit or units] represents our best estimate of the cost to provide capacity in the [relevant Delivery Year]. Therefore if the projects are offered and cleared in the BRA for the [relevant Delivery Year], our organization is committed to completing the projects prior to the end of the [relevant Delivery

Year]. It is our understanding that if the [name of unit or units] clears and the projects included in the sell offer are not in place by the end of the [relevant Delivery Year], our organization may be subject to the provisions of Section 6.8(a) of Attachment DD to the PJM OATT, in addition to any associated capacity deficiency penalties or replacement capacity purchases.

Other statements fully consistent with this statement may be acceptable.

Question 12:

What are the Project Investment recovery options?

Answer 12:

The capital recovery factors (CRFs) are defined in OATT Attachment DD § 6.8(a).

Question 13:

Is there any guarantee for recovery of Project Investment?

Answer 13:

Pursuant to OATT Attachment DD § 6.8(a), a resource for which the Multi-Year Pricing Option is elected and qualifies is eligible to recover its Project Investment costs on the same terms as the New Entry Price Adjustment (NEPA).

Question 14:

A: Is election of the 40 Plus Alternative Option prior to the BRA a binding commitment to offer the resource as such?

B: Regarding the public notice of election of the 40 Plus Alternative Option specified in OATT Attachment DD § 6.8(a), what information does PJM provide to market participants?

Answer 14:

- A: The tariff does not explicitly state whether or not an election for the 40 Plus Alternative Option is a binding commitment. The Market Monitor's view is that provision for an election implies a commitment and, in conjunction with the notice requirement, there is a potential for third party reliance on such an election. The Market Monitor would evaluate a request to rescind an election, and would, at a minimum, expect an explanation of the changed factors and other circumstances material to such a request.
- B: PJM informs the MMU that PJM would notify market participants only that the 40 Plus Alternative CRF option had been elected by a Capacity Market Seller.

Question 15:

If Avoidable Cost Rate data including Avoidable Project Investment Recovery is submitted and approved for a resource and some or all of the resource's capacity is offered at a price below the offer cap, what are the implications of this sell offer being marginal?

Answer 15:

- If the sell offer is higher than the Avoidable Cost Rate (ACR), excluding the Avoidable Project Investment Recovery (APIR) component, less projected PJM market revenues, or, equivalently, if the sell offer is higher than the offer cap that would have resulted if no project investment had been submitted, the sell offer includes project investment recovery and thus, if the sell offer is marginal, a failure to complete the project prior to the end of the Delivery Year will subject the capacity seller to the provisions of PJM OATT Attachment DD § 6.8(a), in addition to any associated capacity deficiency penalties or replacement capacity purchases.
- The tariff language does not directly address the consequences for a capacity market seller that owns, in whole or in part, a Capacity Resource for which there is an offer of a segment of capacity that includes no APIR component, and an offer of a segment of capacity from the same unit that does include an APIR component, when the segment including APIR is marginal. Such offers from units with multiple owners could come from one or more sellers. The MMU believes that all sell offers for capacity from a resource, regardless of whether there is a single owner or multiple owners, any portion of which sets price on the basis of APIR, should be subject to the remedies specified in PJM OATT Attachment DD § 6.8(a) if the project is not completed per the defined deadlines.

Question 16:

A: What capacity revenue is at risk if there are multiple offer segments for a single resource and one sell offer segment sets the clearing price, and then a project that was included in the sell offer was deferred or not completed?

B: What capacity revenue is at risk if there are multiple owners of a resource and the sell offer of one owner, of a group of multiple owners, sets the clearing price, and then a project that was included in that sell offer was deferred or not completed?

Answer 16:

- A: The tariff language in OATT Attachment DD § 6.8(a) does not explicitly contemplate segmented offers from a single owner. Nevertheless, the MMU and PJM have considered this issue and determined that the only reasonable interpretation of the language and application of the provision is that an owner of any portion of

cleared capacity from a resource that sets price on the basis of APIR included with any offer from that same resource is at risk of a “rebate payment” under OATT Attachment DD § 6.8(a) if the APIR is not made in the applicable Delivery Year. Exposure to a possible rebate payment may occur even for a portion of capacity of a resource not offered at the maximum, including full APIR.

- B: The tariff language in OATT Attachment DD § 6.8(a) does not explicitly contemplate multiple owners. Nevertheless, the MMU and PJM have considered this issue and determined that the only reasonable interpretation of the language and application of the provision is that an owner of any portion of cleared capacity from a resource that sets price on the basis of APIR included with any sell offer from that same resource is at risk of a “rebate payment” under OATT Attachment DD § 6.8(a) if the APIR is not made in the applicable Delivery Year. This approach does not require coordinating a common offer or otherwise conflict with the antitrust laws. Owners of existing capacity may offer it at any level up to the offer cap without regard to or knowledge of the level of offers from other capacity owners. Exposure to a possible rebate payment may occur even for a portion of capacity of a resource not offered at the maximum, including full APIR.

Question 17:

Are Combustion Turbine and Combined Cycle major inspection and overhaul costs includable in an Avoidable Cost Rate (ACR)? If so, under which ACR component should they be considered?

Answer 17:

Effective for RPM Auctions for the 2015/2016 Delivery Year and forward, major inspection and overhaul costs are includable in Avoidable Cost Rate (ACR). These costs could be included in Avoidable Maintenance Expenses (AME) and prorated to reflect the percentage of such costs accrued annually. For example, if a unit expects an overhaul every five years, the overhaul cost component in AME should include one fifth of the overhaul costs. Alternatively, capital components of overhaul costs for CT and CC units may be included in APIR for the 2015/2016 Delivery Year and forward, while maintenance expense components may be recovered in one year in AME if it can be shown that the work will be completed in the given delivery year.

Question 18:

Can a Project Investment be included in APIR if it is not initially elected to be recovered in an RPM Auction for the first delivery year after it is expected to enter commercial operation?

Answer 18:

Other than the Mandatory CapEx option, a Project Investment can be included in APIR if it is not initially elected to be recovered in an RPM Auction for the first delivery year after it is expected to enter commercial operation. Such Project Investment may only be includable in APIR for the remaining years of the recovery period using the actual investment costs and the appropriate CRF and recovery period based on the delivery year in which the Project Investment was first includable in APIR.

Refer to Question 25 for details related to the Mandatory CapEx option.

RPM Must Offer Obligation

Question 19:

How does a Capacity Market Seller qualify for an exemption to the RPM Must Offer Obligation?

Answer 19:

A Capacity Market Seller seeking an exemption to the RPM Must Offer Obligation for a resource that it owns or controls must submit a request to the MMU for evaluation no later than 120 days prior to the commencement of the RPM Auction offer period, as defined in PJM OATT Attachment DD § 6.6(g). This request should be in written form on company letterhead. The MMU notifies the Capacity Market Seller and PJM of its determination on the request for exemption to the RPM Must Offer Obligation no later than 90 days prior to the commencement of the RPM Auction offer period. The Capacity Market Seller must notify the MMU, with a copy to PJM, whether it agrees with the RPM Must Offer determination.

If the request for exemption to the RPM Must Offer Obligation is because the resource “is reasonably expected to be physically unable to participate in the relevant auction”, the letter should include the following:

- State the resource, MW quantity, and auction for which exemption to the RPM Must Offer Obligation is sought.
- State the reason as defined in OATT Attachment M-Appendix § II.C.4 that is being used to establish that the resource “is reasonably expected to be physically unable to participate in the relevant auction.”
- Provide an explanation and/or supporting documentation demonstrating the conditions required for the given PJM Tariff defined reason for exemption.

If the request for exemption to the RPM Must Offer Obligation is because the resource “has a financially and physically firm commitment to an external sale of its capacity”, the letter should include the following:

- State the resource, MW quantity, and auction for which exemption to the RPM Must Offer Obligation is sought.
- Provide an explanation and documentation demonstrating that the Capacity Market Seller has entered into a unit-specific bilateral transaction for service to load in an area external to PJM and that the resource is identified on a unit-specific basis as a network resource under the transmission tariff for the control area applicable to such external load, as defined in PJM OATT Attachment DD § 6.6(g).

Question 20:

What constitutes a documented plan to retire a unit as related to the reason for exemption to the RPM Must Offer Obligation as defined in PJM OATT Attachment M–Appendix § II.C.4.A?

Answer 20:

- A Capacity Market Seller may qualify for an exception to the RPM Must Offer Obligation under PJM OATT Attachment M–Appendix § II.C.4.A by providing a documented plan of retirement to the MMU and by demonstrating that it has notified PJM of the retirement in accordance with OATT Part V § 113.1. OATT Part V § 113.2 requires “[f]or generating units that will continue to operate beyond their desired Deactivation Dates, Transmission Provider shall ... within 90 days of Generation Owner’s or its Designated Agent’s notice pursuant to section 113.1 of this Tariff, post on its internet site full details of the transmission upgrades necessary to alleviate the reliability impact that would result from the Deactivation of the generating unit.” PJM has a policy to make deactivation notices public.
- The MMU also requests information to support the economic decision to retire in order to apply the required market power test. In addition, the MMU requests a documented plan for addressing contingencies including any circumstances that would result in a reversal of the decision to retire and an estimate of the level of revenues required to remain in service. The MMU may request additional information based on its review of the initial submittal and the circumstances specific to the resource.
- This analysis of the requested deactivation under OATT Attachment M-Appendix § II.C.4.A is separate from the market power analysis performed by the MMU of the decision to deactivate, under OATT Attachment M-Appendix § IV.1.
- If a decision is made to make the date of retirement earlier than the date first specified, then an additional market power analysis will be necessary to evaluate the accelerated time frame, under OATT Attachment M-Appendix § IV.1.

Environmental Regulations

Question 21:

If a Capacity Market Seller determines that the costs of compliance to meet environmental regulations will be prohibitive, can they retire or mothball the resource instead of offering it into an RPM Auction?

Answer 21:

- Yes, provided that the Capacity Market Seller can meet the requirements set forth in one or both of Sections 4.A or 4.C of OATT Attachment M–Appendix. For additional information about what constitutes a “documented plan of retirement,” refer to Question 20:. To qualify for Section 4.C, the IMM will evaluate whether a valid regulatory directive, etc. exists and whether the costs imposed are prohibitive such that the directive “results in the retirement of the resource.”
- The MMU expects participants to offer units based on their calculated costs of compliance and based on their own economic decisions. If the units do not clear, participants have the option to propose retirement of the units.
- The MMU expects that there will be a corporate decision about participation in the RPM Auction based on the known facts about an environmental regulation and that the corporate decision is documented.
- A plan to mothball a resource is not sufficient to qualify for an exception to the RPM Must Offer Obligation.

Question 22:

What happens if the requirements for the environmental regulations are significantly different for a unit in the future than they are at the time of the ACR data submittal for an RPM Auction?

Answer 22:

- If the requirements for the environmental regulations are significantly different for a unit after the ACR data submittal but before the RPM Auction window opening, the MMU will be flexible in allowing updates to the ACR data. Capacity Market Sellers should update their ACR data to be consistent with the current best information prior to the auction.
- If a project at a unit is reviewed and accepted for an RPM Auction and included in the Capacity Market Seller’s offer and the unit is marginal in that RPM Auction, the Capacity Market Seller is subject to the provisions OATT Attachment DD § 6.8(a) if that project is not in commercial operation prior to the end of the relevant Delivery Year.

- If, after the RPM Auction, the requirements for the environmental regulations change such that no project investment is necessary to provide capacity through the relevant Delivery Year, or the unit is granted an extension for compliance past the end of the relevant Delivery Year, the Capacity Market Seller may be required to make such investment during the subsequent Delivery Year or make the same level of investment in other units operated by the same Capacity Market Seller in the same Locational Deliverability Area (LDA) by the end of the relevant Delivery Year or else may be subject to the penalty referred to as a “rebate payment” under OATT Attachment DD § 6.8(a).
- Similarly, if, after the BRA, the Capacity Market Seller decides that it is optimal to retire the unit prior to the end of the Delivery Year rather than proceed with a project investment which has been reviewed and submitted in the capacity sell offer, and the unit was marginal, the Capacity Market Seller is subject to the provisions of OATT Attachment DD § 6.8(a).

Question 23:

Do Capacity Market Sellers have the option to offer a resource without project investment under the expectation that the resource will retire when the requirements for an environmental regulation become effective?

Answer 23:

Capacity Market Sellers may offer in an RPM Auction with the expectation that no capital investment will be required to provide capacity in the relevant Delivery Year either due to changes in requirements or the provision of an extension. Capacity Market Sellers may offer in the RPM Auction with the expectation that capacity market prices will lead to profitable operations for part of the Delivery Year, with the intent to retire the resource once the environmental requirements prohibit operations. In either case, Capacity Market Sellers are subject to penalties for the failure to meet their RPM resource commitments for any period in the Delivery Year. Capacity Market Sellers that anticipate a failure to meet their RPM resource commitments for any portion of a Delivery Year due to the environmental requirements should notify PJM and the MMU in writing in the form of a statement signed by a financial officer or executive responsible for generation or markets prior to January 1 of the relevant Delivery Year so that it may be considered prior to updating the planning period parameters for the Third Incremental Auction for the relevant Delivery Year.

Question 24:

What are the relevant deadlines for RPM Auctions that Capacity Market Sellers owning resources affected by environmental deadlines should consider?

Answer 24:

- Timelines and deadlines for RPM/ACR related tasks for upcoming RPM Auctions can be found on the Monitoring Analytics website's Tools page: <http://www.monitoringanalytics.com/tools/tools.shtml>
- If electing the 40 Plus Alternative CRF, written notice must be provided to PJM no later than six months prior to the Base Residual Auction. OATT Attachment DD § 6.8(a) does provide that "shorter notice may be provided if unforeseen circumstances give rise to the need to make such election and such seller gives notice as soon as practicable."
- To satisfy the RPM Must Offer Obligation under the reason for exemption in OATT Attachment M–Appendix § II.C.4.A, a notice of retirement with a deactivation date prior to the end of the relevant Delivery Year must be submitted to PJM prior to the opening of the auction window.

Question 25:

Can a Capacity Market Seller initially elect the Mandatory Capital Expenditures (CapEx) option in a Base Residual Auction for a Delivery Year subsequent to the Delivery Year in which such project is expected to enter commercial operation if pending environmental regulations were not final at the time of the Base Residual Auction for the Delivery Year in which the project is expected to enter commercial operation?

Answer 25:

No. The applicable market rule requires, "[a] Capacity Market Seller that wishes to elect the Mandatory CapEx option for a Project Investment must do so beginning with the Base Residual Auction for the Delivery Year in which such project is expected to enter commercial operation." OATT Attachment DD § 6.8(a). When a directive requiring new investment occurs after a Base Residual Auction, and also requires that such investment enter commercial operation prior to beginning of the relevant Delivery Year, a Capacity Market Seller cannot include APIR under the Mandatory CapEx provision.

Question 26:

Are the costs associated with Cross-State Air Pollution Rule (CSAPR) allowances or other emission allowances includable in a Generation Capacity Resource's Avoidable Cost Rate (ACR)?

Answer 26:

No. As specified in OATT Attachment DD § 6.8(c), the calculation of an ACR excludes variable costs recoverable under cost-based offers to sell energy. Emission allowances are

includable under the “Other Incremental Operating Costs” component of a cost-based offer to sell energy pursuant to Schedule 2 of the PJM Operating Agreement, Schedule 2, Exhibit A.