

Must-Offer Exception Process Issue

Patrick Bruno
Sr. Engineer, Capacity Market Operations
Market Implementation Committee
August 8, 2018



- Issue brought forward by Exelon to investigate:
 - Possible reforms to the RPM Must-Offer Exception Process
 - Clear guidelines on documentation required by the IMM and PJM to grant a Must-Offer Exception
 - Improved efficiency of Must-Offer Exception requests
 - Process for resources with an existing must-offer requirement to become energy only resources
- Approved at the March MIC and assigned to the MIC group



PJM Proposal



Must-Offer Exception Requests: Process Efficiency

Concern: Investigate ways to streamline the process of submitting Must-Offer Exception requests (e.g. avoid the need to resubmit the same request/documentation with every auction)

- Requests must be submitted with the supporting documentation by the Tariff-specified deadlines prior to RPM auctions
- Participants may specify multiple auctions for which they seek an exception in their written Must-Offer Exception request, but must create a new request in MIRA with each subsequent auction
 - Requests are submitted to the IMM through the MIRA system for each auction. If the request and
 documentation remain the same for multiple auctions, participants may use the comments field in MIRA
 for the subsequent auctions to notify the IMM that it has remained the same and avoid re-submittal.
- Requests reviewed by PJM and the IMM each auction
 - Participant must notify PJM and the IMM of any material changes related to the request up through the closing of the relevant auction(s) offer window

Proposal: Codify the current process in Manual 18 of allowing participants to specify multiple auctions in their written Must-Offer Exception requests for PJM/IMM to review with each auction

A MIRA request will still need to be created for each subsequent auction for tracking purposes,
 but without the need to resubmit all the same supporting data/documentation



CP Must-Offer Exceptions: Acceptable Reasons

Concern: Current rules do not explicitly describe timing as an acceptable reason of being physically incapable of satisfying the requirements of a CP resource.

- For example, a gas unit that may be able to firm up its fuel sources by installing on-site oil storage can complete the project within the time-span between the BRA and Delivery Year, but not between the Incremental Auctions and Delivery Year, and therefore requests a CP Must Offer Exception for only the Incremental Auctions of the Delivery Year
- OATT Att. DD 6.6A (c) "Exceptions to the requirement in subsection (a) shall be permitted only for a resource which the Capacity Market Seller demonstrates is reasonably expected to be physically incapable of satisfying the requirements of a Capacity Performance Resource"

Proposal: Explicitly include timing as an acceptable reason in Manual 18

 Exceptions to the capacity performance must-offer requirement will be permitted for a generation capacity resource which the Capacity Market Seller demonstrates is reasonably expected to be physically incapable of satisfying the requirements for a Capacity Performance Generation Resource by the start of the Delivery Year.



Capacity Resource Status Change

Concern: There is no clear and comprehensive process described in the Governing Documents or Manuals for a Capacity Resource to become an energy only resource

 The Tariff speaks to a Capacity Resource status change in Attachment DD, but is not clear on all the details of that process (e.g. handling of CIRs)

Proposal: Participants must submit a written request to PJM and the IMM, along with all supporting data and documentation, to remove a Generation Capacity Resource from its Capacity Resource status

- A Capacity Resource status change is not allowed while the unit retains a capacity commitment for the relevant time period (status quo)
- A status change will be required for Existing Generation Capacity Resources that are repeatedly approved for CP Must-Offer Exceptions and do not offer their unit in RPM BRAs for three consecutive Delivery Years (status change required at start of 4th Delivery Year)



Capacity Resource Status Change: Ramifications

- The generation unit will no longer be a Capacity Resource, and therefore, no longer eligible to offer in RPM auctions or take on a capacity commitment
- The Capacity Interconnection Rights (CIRs) of the resource will be relinquished in a manner consistent with a generation unit that is deactivating
 - Loss of CIRs described in section 230.3.3 of the PJM Tariff
 - CIRs will terminate one year from the date on which the Capacity Resource status change takes
 effect, unless the holder of such rights submits a new Generation Interconnection Request
 within that time period which uses those same CIRs

www.pjm.com 7 PJM©2018



Capacity Resource Status Change: Process

- Requests and PJM/IMM determinations for a Capacity Resource status change will follow the same deadlines of Must-Offer Exceptions related to deactivation for RPM auctions
 - Deadlines outlined on next slide
 - Preliminary and final MWs of units requesting a status change will be included in the posting of Must-Offer Exceptions related to deactivations
- PJM will run any necessary reliability studies for relinquishment of CIRs by the resource, similar to the analyses done for deactivating units
 - e.g. Generator / Load Deliverability Tests
- MMU will conduct an economic feasibility test to check for uncompetitive behavior and market power
- Once approved, the generation unit will no longer be modeled as a Capacity Resource effective with the date of the status change
 - Amended Interconnection Service Agreement for the generator



Capacity Resource Status Change: Deadlines

Activity	Deadline
Preliminary request for Capacity Resource status change	SEPT01 prior to BRA, 240 days prior to IA
Final request for Capacity Resource status change	DEC01 prior to BRA, 120 Days prior to IA
IMM provides determination on status change request	90 days prior to auction
Capacity Market Sellers notify PJM/IMM of agreement with IMM determination on status change request	80 days prior to auction
PJM provides determination on status change request	65 days prior to auction

www.pjm.com 9 PJM©2018



Appendix: Prior Education



Capacity Resource or Energy Resource?

- When a new generator connects to PJM's system through the PJM Interconnection Process, it chooses request to be a Capacity Resource or an Energy Resource
 - If it chooses to be a Capacity Resource, it will be studied as such and will be granted Capacity Interconnection Rights ("CIRs")
- A DR or EE resource is considered a Capacity Resource if it has been accredited as such under RAA Schedule 6.



- All available megawatts of an Existing Generation Capacity Resource must be offered in each RPM Auction for a Delivery Year ("DY")
- Simplified example: 100 MW Existing Generation Capacity Resource -
 - Capacity Market Seller of that resource must offer 100 MW in BRA; clears 50 (thus 50 MWs still available)
 - Must offer 50 MWs in 1st Incremental Auction ("IA"); clears 25 (thus 25 MWs still available)
 - Must offer 25 MWs in 2nd IA; clears 0 (thus 25 MWs still available)
 - Must offer 25 MWs in 3rd IA; clears 0 (it is still a Capacity Resource, and must do this all again in the next DYs set of RPM Auctions)



- Currently, two Must-Offer Exception sections one that is general and one that is specific to Capacity Performance
- General Must-Offer Exceptions in Tariff, Att. DD, sec. 6.6(g):
 - is reasonably expected to be physically unable to participate in the relevant Delivery Year;
 - has a financially and physically firm commitment to an external sale of its capacity, or
 - was interconnected an Energy Resource and not subsequently converted to a Capacity Resource.

General Must-Offer Exceptions

- What does "physically unable to participate" mean?
 - Documented plan to retire during or prior to the DY and has submitted its Deactivation notice to PJM
 - Significant physical operational restrictions cause long term or permanent changes to the installed capacity value of the resource, or the resource is under major repair that will extend into the applicable DY
 - Involved in an ongoing regulatory proceeding specific to the resource (e.g., environmental) and has received an order...or other final directive that will result in the retirement of the resource
 - It is only considered "Existing" because it cleared an RPM Auction, but will not be in-service by the start of the applicable DY



CP Resource Must-Offer Exceptions

- Under Tariff, Attachment DD, section 6.6A
 - Physically incapable of being a CP resource
 - The review process is the same as under 6.6(g)
 - Intermittents and storage are categorically exempt



Must-Offer Exception Request Deadlines

Activity	Deadline
Preliminary must-offer exception for reason of deactivation	SEPT01 prior to BRA, 240 days prior to IA
Final must-offer exception for reason of deactivation	DEC01 prior to BRA, 120 Days prior to IA
Must-offer exception for other than deactivation	120 days prior to auction
IMM provides determination on must offer exception	90 days prior to auction
Capacity Market Sellers notify PJM/IMM of agreement with IMM determination on must offer exception	80 days prior to auction
PJM provides determination on must offer exception	65 days prior to auction
Capacity Market Seller notifies PJM/IMM of intent to exercise approved exception	65 days prior to auction

www.pjm.com 16 PJM©2018



Capacity Performance (CP) Resource Requirements

- Obligated to deliver energy during the relevant Delivery Year as scheduled and/or dispatched by PJM during Performance Assessment Intervals
 - PJM Tariff does not prescribe specific fuel arrangements or investment requirements needed to meet CP performance obligations



CP Resource Must-Offer Exceptions

- Under Tariff, Attachment DD, section 6.6A
 - reasonably expected to be physically incapable of satisfying the requirements of a CP Resource
 - The review process and timeline is the same as under 6.6(g)
 - 120 days prior to auction for reasons other than deactivation
 - Intermittent and storage are categorically exempt



Physically Incapable of being a CP Resource

- "Physically incapable" includes...
 - Necessary capital improvements, or new fuel delivery infrastructure, that cannot be arranged, permitted, and completed in time for the relevant Delivery Year
- "Physically incapable" does not include...
 - Seller's refusal to make investments, or allocate the operating budget, needed to bring the resource's performance up to the necessary level
 - Economic feasibility tests



Appendix - Tariff Provisions and Definitions

Tariff, sec. 36.1.1 Interconnection Services for Generation:

Generation Interconnection Customers may request either of two forms of Interconnection Service, i.e., interconnection as a Capacity Resource or as an Energy Resource. Energy Resource status allows the generator to participate in the PJM Interchange Energy Market pursuant to the PJM Operating Agreement. Capacity Resource status allows the generator to participate in the PJM Interchange Energy Market to be utilized by load-serving entities in the PJM Region to meet capacity obligations imposed under the Reliability Assurance Agreement and/or to be designated as a Network Resource under Part III. Capacity Resources also may participate in Reliability Pricing Model Auctions and in Ancillary Services markets pursuant to the PJM Tariff or the Operating Agreement. Capacity Resource status is based on providing sufficient transmission capability to ensure deliverability of generator output to the aggregate PJM Network Load and to satisfy the contingency criteria in the Applicable Standards. Specific tests performed during the Generation Interconnection Feasibility Study and later System Impact Study will identify those upgrades required to satisfy the contingency criteria applicable at the generator's location.

RAA, sec. 1 Capacity Resources Capacity Resources shall mean megawatts of (i) net capacity from Existing Generation Capacity Resources or Planned Generation Capacity Resources meeting the requirements of Schedules 9 and 10 that are or will be owned by or contracted to a Party and that are or will be committed to satisfy that Party's obligations under this agreement, or to satisfy the reliability requirements of the PJM Region, for a Delivery Year; (ii) net capacity from Existing Generation Capacity Resources or Planned Generation Capacity Resources not owned or contracted for by a Party which are accredited to the PJM Region pursuant to the procedures set forth in Schedules 9 and 10; and (iii) load reduction capability provided by Demand Resources or Energy Efficiency Resources that are accredited to the PJM Region pursuant to the procedures set forth in Schedule6.

Tariff, sec. 1 Energy Resource:

A generating facility that is not a Capacity Resource.



Appendix Cont'd

Tariff, sec. 1 Capacity Interconnection Rights:

The rights to input generation as a Generation Capacity Resource into the Transmission System at the Point of Interconnection where the generating facilities connect to the Transmission System.

RAA, sec. 1 Existing Generation Capacity Resource:

"Existing Generation Capacity Resource" shall mean, for purposes of the must-offer requirement and mitigation of offers for any RPM Auction for a Delivery Year, a Generation Capacity Resource that, as of the date on which bidding commences for such auction: (a) is in service; or (b) is not yet in service, but has cleared any RPM Auction for any prior Delivery Year. A Generation Capacity Resource shall be deemed to be in service if interconnection service has ever commenced (for resources located in the PJM Region), or if it is physically and electrically interconnected to an external Control Area and is in full commercial operation (for resources not located in the PJM Region). The additional megawatts of a Generation Capacity Resource that is being, or has been, modified to increase the number of megawatts of available installed capacity thereof shall not be deemed to be an Existing Generation Capacity Resource until such time as those megawatts (a) are in service; or (b) are not yet in service, but have cleared any RPM Auction for any prior Delivery Year.