

PJM Communication regarding MOPR-Related Activities and Deadlines Required for Capacity Market Seller Participation in the Upcoming 2022/2023 Base Residual Auction
February 27, 2019

Capacity Market Seller activities required for participation in the upcoming 2022/2023 Reliability Pricing Model (“RPM”) Base Residual Auction (“BRA”) are contained in the RPM Auction Schedule.¹ As indicated on the RPM Auction Schedule, deadlines are soon approaching for required seller activities related to the Minimum Offer Price Rule (“MOPR”) provisions of RPM. Substantial revisions of existing MOPR provisions are proposed in PJM’s Capacity Reform filing (Docket No. EL18-178), which is currently under consideration by the Federal Energy Regulatory Commission (“Commission”) for implementation in the upcoming BRA. This communication is intended to provide guidance to Capacity Market Sellers given that the Commission has not yet issued a ruling on PJM’s Capacity Reform filing and the deadlines for MOPR-related requirements are approaching.

Given the pendency of the Capacity Reform filing, PJM believes it is in the best interest of all impacted parties to proceed down a path of satisfying all MOPR-related requirements by their specified deadline as described by current tariff language, as well as, by the proposed deadlines in PJM’s Capacity Reform filing. This “parallel path” approach will help to ensure that the BRA is conducted timely regardless of the ultimate outcome of a Commission order. PJM will provide participants with follow-up communication as requirement deadlines approach and/or further guidance from the Commission is received and processed.

PJM’s Capacity Reform filing proposes substantial changes to the existing MOPR provision of RPM. The proposed changes are summarized on Tables 1 through 3 which compare the existing MOPR provisions of RPM to the MOPR provisions proposed in PJM’s Capacity Market filing as they relate to the upcoming 2022/2023 BRA. Specifically, Table 1 compares the criterion that determines whether a Capacity Resource is subject to the MOPR in an RPM Auction; Table 2 compares the default MOPR floor offer prices that are applicable to Capacity Resources that are deemed to be subject to MOPR; and, Table 3 compares the exception processes that are available to Capacity Resources that are deemed to be subject to MOPR.

The most time-sensitive of the required MOPR-related activities is the requirement, under the PJM Capacity Reform proposal, that each Capacity Market Seller must by no later than March 17, 2019, certify whether or not each Capacity Resource that the Capacity Market Seller intends to offer into the BRA is a Capacity Resource with Actionable Subsidy. PJM intends to employ a new screen in the Capacity Exchange system to facilitate this self-certification requirement. A separate communication describing the requirement in more detail and providing instruction for navigation through the new screen will be forthcoming. PJM urges all Capacity Market Sellers to prepare, in the meantime, for this requirement by reviewing the key definitions and processes associated with a Capacity Resource with Actionable

¹ The RPM Auction Schedule is located at <https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/rpm-auction-schedule.ashx?la=en>

Subsidy. The Tables below provide reference to the relevant sections of the tariff language proposed in PJM’s Capacity Reform filing.

Table 1 – MOPR Applicability of Existing MOPR Provisions versus Proposed MOPR Provisions

MOPR Applicable Resources	Existing MOPR Provisions	MOPR Provisions Proposed in PJM Capacity Reform Filing
Capacity Resources that are subject to MOPR	The sell offer of any Generation Capacity Resource, including an uprate of any size of a Generation Capacity Resource, that has not previously cleared in an RPM Auction for the relevant delivery year or prior delivery year, and that is located in an LDA for which a separate VRR Curve is established for use in the BRA, and that is not based on nuclear, coal, IGCC, hydroelectric, wind or solar facilities.	The sell offer of any Demand Resource or any Generation Capacity Resource that the Capacity Market Seller ("CMS") has specified to be a Capacity Resource with Actionable Subsidy unless such CMS elected the Resource Carve-Out for such Capacity Resource.
Seller Certification of Capacity Resource with Actionable Subsidy (required by no later than 3/17/2019)	Not Applicable	Each CMS must specify whether each Demand Resource or Generation Capacity Resource that the CMS intends to offer into the 2022/2023 BRA is a Capacity Resource with Actionable Subsidy.
Definition of Capacity Resource with Actionable Subsidy	Not Applicable	<p>Any Demand Resource or Generation Capacity Resource for which the CMS is entitled to a Material Subsidy* that the CMS has not certified that it will forego receiving during the applicable delivery year, or, for which the seller has received a Material Subsidy and has yet to clear any RPM Auction since it received the Material Subsidy, except that a Capacity Resource with Actionable Subsidy does not include:</p> <ul style="list-style-type: none"> • Any Capacity Resource having a capacity value less than 20 MW; or, • Any Generation Capacity Resource for which electricity production is not the primary purpose of the facility, but rather a byproduct of the resource’s primary purpose, such as most waste to energy or combined heat and power facilities. Such resources include those fueled entirely by, for example, landfill gas, wood waste, municipal solid waste, black liquor, coal mine gas, or distillate fuel oil; or, • Any Capacity Resource that is owned and contracted capacity of a Self-Supply LSE and that has cleared in any prior RPM Auction. <p>* see Material Subsidy definition in PJM filing</p>

**Table 2 – Default MOPR Floor Offer Prices of Existing MOPR Provisions
versus Proposed MOPR Provisions**

Default MOPR Floor Offer Price	Existing MOPR Provisions	MOPR Provisions Proposed in PJM Capacity Reform Filing																																																								
<p>Default MOPR Floor Offer Price applicable to Generation Capacity Resources that are subject to MOPR and that have not cleared in a Prior RPM Auction (2022/2023 \$/MW-day)</p>	<p>Values of top table below are based on existing tariff provisions associated with determination of Net CONE for Reference Resource CT and CC. Values of second table below are based on Net CONE of Reference Resource CT as determined using provisions pending FERC review as proposed in PJM's Quadrennial Review Filing</p> <table border="0"> <tr> <td>Generation Type</td> <td>Area 1</td> <td>Area 2</td> <td>Area 3</td> <td>Area 4</td> </tr> <tr> <td>CT</td> <td>\$278.28</td> <td>\$255.56</td> <td>\$286.52</td> <td>\$246.73</td> </tr> <tr> <td>CC</td> <td>\$326.84</td> <td>\$270.01</td> <td>\$309.05</td> <td>\$271.37</td> </tr> <tr> <td>Other</td> <td>\$216.44</td> <td>\$198.77</td> <td>\$222.85</td> <td>\$191.30</td> </tr> </table> <table border="0"> <tr> <td>Generation Type</td> <td>Area 1</td> <td>Area 2</td> <td>Area 3</td> <td>Area 4</td> </tr> <tr> <td>CT</td> <td>\$220.46</td> <td>\$185.66</td> <td>\$166.28</td> <td>\$182.39</td> </tr> <tr> <td>CC</td> <td>\$326.84</td> <td>\$270.01</td> <td>\$309.05</td> <td>\$271.37</td> </tr> <tr> <td>Other</td> <td>\$171.47</td> <td>\$144.40</td> <td>\$129.33</td> <td>\$141.86</td> </tr> </table> <p>Generation resource types other than CTs and CCs are subject to MOPR. The MOPR Floor Offer Price is specified as \$0.00 for nuclear, coal, IGCC, hydro, wind and solar facilities and is set equal to 70% of the CT Net CONE for all other resource types.</p>	Generation Type	Area 1	Area 2	Area 3	Area 4	CT	\$278.28	\$255.56	\$286.52	\$246.73	CC	\$326.84	\$270.01	\$309.05	\$271.37	Other	\$216.44	\$198.77	\$222.85	\$191.30	Generation Type	Area 1	Area 2	Area 3	Area 4	CT	\$220.46	\$185.66	\$166.28	\$182.39	CC	\$326.84	\$270.01	\$309.05	\$271.37	Other	\$171.47	\$144.40	\$129.33	\$141.86	<table border="0"> <tr> <td>Nuclear</td> <td>\$1,451</td> </tr> <tr> <td>Coal</td> <td>\$1,023</td> </tr> <tr> <td>Combined Cycle</td> <td>\$438</td> </tr> <tr> <td>Combustion Turbine</td> <td>\$355</td> </tr> <tr> <td>Hydro</td> <td>\$1,066</td> </tr> <tr> <td>Solar PV</td> <td>\$387</td> </tr> <tr> <td>Onshore Wind</td> <td>\$2,489</td> </tr> <tr> <td>Offshore Wind</td> <td>\$4,327</td> </tr> </table>	Nuclear	\$1,451	Coal	\$1,023	Combined Cycle	\$438	Combustion Turbine	\$355	Hydro	\$1,066	Solar PV	\$387	Onshore Wind	\$2,489	Offshore Wind	\$4,327
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<p>Default MOPR Floor Offer Price applicable to Demand Resources that are subject to MOPR and that have not cleared in a prior RPM Auction (2022/2023 \$/MW-day)</p>	<p align="center">Not Applicable</p>	<table border="0"> <tr> <td>ATSI (rest of)</td> <td>\$48.26</td> <td>EMAAC (rest of)</td> <td>\$59.82</td> </tr> <tr> <td>ATSI-Cleveland</td> <td>\$47.91</td> <td>MAAC (rest of)</td> <td>\$54.33</td> </tr> <tr> <td>BGE</td> <td>\$67.34</td> <td>PEPCO</td> <td>\$50.97</td> </tr> <tr> <td>COMED</td> <td>\$59.63</td> <td>PPL</td> <td>\$58.79</td> </tr> <tr> <td>DAY</td> <td>\$31.98</td> <td>PSEG (rest of)</td> <td>\$62.83</td> </tr> <tr> <td>DEOK</td> <td>\$28.79</td> <td>PSEG-NORTH</td> <td>\$53.46</td> </tr> <tr> <td>DPL-SOUTH</td> <td>\$63.09</td> <td>RTO (rest of)</td> <td>\$50.95</td> </tr> </table>	ATSI (rest of)	\$48.26	EMAAC (rest of)	\$59.82	ATSI-Cleveland	\$47.91	MAAC (rest of)	\$54.33	BGE	\$67.34	PEPCO	\$50.97	COMED	\$59.63	PPL	\$58.79	DAY	\$31.98	PSEG (rest of)	\$62.83	DEOK	\$28.79	PSEG-NORTH	\$53.46	DPL-SOUTH	\$63.09	RTO (rest of)	\$50.95																												
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<p>Default Avoidable Cost Rate applicable to Capacity Resources that are subject to MOPR and that have cleared in a prior RPM Auction (2022/2023 \$/MW-day)</p>	<p align="center">Not Applicable</p>	<table border="0"> <tr> <td>Nuclear - Single Unit</td> <td>\$631</td> </tr> <tr> <td>Nuclear - Dual Unit</td> <td>\$593</td> </tr> <tr> <td>Coal</td> <td>\$171</td> </tr> <tr> <td>Combined Cycle</td> <td>\$86</td> </tr> <tr> <td>Combustion Turbine</td> <td>\$57</td> </tr> <tr> <td>Hydro</td> <td>\$0</td> </tr> <tr> <td>Pumped Hydro</td> <td>\$0</td> </tr> <tr> <td>Solar PV</td> <td>\$0</td> </tr> <tr> <td>Onshore Wind</td> <td>\$0</td> </tr> </table> <p>The default MOPR Floor Offer Price for a Generation Resource that is subject to MOPR and that has cleared in a prior RPM Auction will be set equal to the applicable default ACR value of above table minus the average net PJM market revenues of the resource from the three most recent calendar years.</p> <p>The default MOPR Floor Offer Price for a Demand Resource that is subject to MOPR and that has cleared in a prior RPM Auction is \$0.</p>	Nuclear - Single Unit	\$631	Nuclear - Dual Unit	\$593	Coal	\$171	Combined Cycle	\$86	Combustion Turbine	\$57	Hydro	\$0	Pumped Hydro	\$0	Solar PV	\$0	Onshore Wind	\$0																																						
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Table 3 – MOPR Exceptions of Existing MOPR Provisions versus Proposed MOPR Provisions

MOPR Exception	Existing MOPR Provisions	MOPR Provisions Proposed in PJM Capacity Reform Filing
<p>Resource-Specific MOPR Floor Offer Price Request for Generation Capacity Resources that are subject to MOPR and that have not cleared a prior RPM Auction</p> <p>(required by no later than 4/16/2019)</p>	<p>The CMS may request determination of a resource-specific MOPR Floor Offer Price to support the fixed development, construction, operation, and maintenance costs of the Capacity Resource, as well as estimates of offsetting net revenues solely from PJM-administered markets.</p> <p>The requirements of such a request under the PJM Capacity Reform filing are identical to those of the existing MOPR provisions but are described in different sections of Tariff, Attachment DD . The request requirements are described in Tariff, Attachment DD, section 5.14(h)(5) and are described in Tariff, Attachment DD, section 5.14(h)(v)(B)(2) of the tariff language proposed in PJM’s Capacity Reform filing.</p>	
<p>Resource-Specific ACR Request for Generation Capacity Resources that are subject to MOPR and that have not cleared a prior RPM Auction</p> <p>(required by no later than 4/16/2019)</p>	<p>Not Applicable</p>	<p>The CMS may request a determination of resource-specific ACR, net of E&AS revenues, in accordance with Tariff, Attachment DD, section 6.8</p>
<p>Self-Supply Exception Request</p> <p>(required by no later than 4/16/2019)</p>	<p>Not Applicable</p>	<p>The Self-Supply LSE may request a self-supply exemption determination in accordance with Tariff, Attachment DD, section 5.14(h)(ii)(D) of the tariff language proposed in PJM’s Capacity Reform filing.</p>
<p>CMS Certifies that it will forgo Material Subsidy for applicable Delivery Year</p> <p>(required by no later than 7/15/2019)</p>	<p>Not Applicable</p>	<p>The CMS may certify that it will forgo any Material Subsidy which it is entitled receive for the relevant Delivery Year.</p>
<p>CMS Election of Resource Carve-Out Option</p> <p>(required by no later than 7/15/2019)</p>	<p>Not Applicable</p>	<p>A CMS with a Capacity Resource with Actionable Subsidy may elect the Resource Carve-Out Option in accordance with Tariff, Attachment DD, section 5.14(h)(vi) of the tariff language proposed in PJM’s Capacity Reform filing.</p>