PJM MOPR Implementation

Demand Response Subcommittee

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What are Existing Exempt MWs for purpose of DR exemption?

- The total Existing Exempt DR MW quantity is the **highest registered customer MWs at time of Order (using highest value over past three years)** by zone or sub-zone.
  - This satisfies the Order’s requirement for (1) **have successfully cleared an annual or incremental capacity auction prior to this order**; or (2) **have completed registration on or before the date of this order**.
  - This piggybacks off the existing PJM process for determining Pre-Auction Credit Requirements for DR.
- How are Existing Exempt MWs applied in the auction planning process?
  - PJM to develop a template that subtracts Existing Exempt DR MWs from total Nominated Existing DR MWs to identify the remaining existing DR MWs subject to MOPR.
  - A CSP’s registered customer lists and associated MWs with each customer will change year to year; once a customer’s MW becomes “existing” it is naturally part of Nominated Existing DR MWs and will be applied against the Existing Exempt DR MWs.

**Existing Nominated DR MWs refers to current CSP utility ID customer registrations’ MW**
Exempt (continued)

- Existing Exempt DR quantity is applied against Nominated Existing DR
- All Nominated Planned DR subject to MOPR and is categorically distinct from Existing Exempt DR

<table>
<thead>
<tr>
<th>Zone or Sub-Zone</th>
<th>A</th>
<th>B</th>
<th>C = B - A</th>
<th>D = Greater of C or zero</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Exempt DR (static)</td>
<td>Existing Exempt DR (changes auction to auction, no credit required)</td>
<td>Nominated Existing DR minus Existing Exempt DR</td>
<td>Nominated Existing DR subject to MOPR (changes auction to auction, no credit required but MOPR screen)</td>
<td>Nominated Planned DR subject to MOPR (changes auction to auction, requires credit and MOPR screen)</td>
<td></td>
</tr>
<tr>
<td>PECO</td>
<td>100</td>
<td>225</td>
<td>125</td>
<td>125</td>
<td>12</td>
</tr>
<tr>
<td>PS-NORTH</td>
<td>50</td>
<td>25</td>
<td>(25)</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>BGE</td>
<td>75</td>
<td>85</td>
<td>10</td>
<td>10</td>
<td>17</td>
</tr>
</tbody>
</table>
Offer Segments “Menu”

Entirely unsubsidized
- Competitive Exemption
- No price floor

Fully Subsidized
- Default
- Default offer floor

Fully Subsidized
- Unit Specific Exemption
- Floor determined by study

Mixed subsidized & unsubsidized
- Offer segments subject to associated rules
- Price floors by segment, weighted average
Weighted Average Approach

Under the weighted average resource approach, which is similar to what is used in ISO-NE, the CSP would choose how many of the MWs in its resource will be subsidized and how many will be unsubsidized. Through the competitive exemption, the unsubsidized portion would have an offer floor of $0, and the subsidized portion would have an offer floor that would be the lower of the default offer floor specific to the technology that is being used or the unit-specific exemption price. So if a CSP wished to qualify a 100-MW resource, with 90 MWs that were not subsidized and 10 MWs that were subsidized that had a default offer floor price of $200/MW-day, the weighted average MOPR price for the resource would be $20/MW-day ( \([200 \times 10] + [0 \times 90] / 100 = 20\) )

ISO-NE Appendix A III.A.21.2 (c): “For a new capacity resource composed of assets having different technology types the Offer Review Trigger Price shall be the weighted average of the Offer Review Trigger Prices of the asset technology types of the assets that comprise the resource, based on the expected capacity contribution from each asset technology type. Sufficient documentation must be included in the resource’s qualification package to permit the Internal Market Monitor to determine the weighted average Offer Review Trigger Price.”
Registration Process

• PJM should update registration process in DR Hub to include flagging subsidized registrations. Once the MW volume of subsidized resources exceeds what was qualified for that delivery year across all RPM auctions, the CSP can no longer register any more subsidized DR customers.
  • No need for CSP to explicitly know which registrations will be subsidized at time of auction, rather the CSP must make a forward-looking estimate of expected subsidized MWs.
• CSP fills the resource with subsidized or unsubsidized registration types so long as the offer floors associated with the registrations are below the cleared offer floor level.
• In other words, it does not need to have subsidized resources later, but it reserves the option to if it clears in the auction.
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