MOPR Default Offer Price Floors

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Default Offer Price Floor Filing Requirements

- Default Offer Price Floor applicable to any resource type, new or existing, that receives, or is entitled to receive a state subsidy
- An explanation, including workbooks and formulas, as appropriate, of the Default Offer Price Floor values
- A process to update the Default Offer Price Floor values annually and as part of PJM's quadrennial review
- Net Cost of New Entry for planned (new) resources
- Net Avoidable Cost Rate for existing resources

Comparison of Default Offer Price Floor Methodology

Cost of New Entry (CONE) vs. **Avoidable Cost Rate** (ACR)

CONE reflects a *new* resource's capital investment and fixed operations and maintenance expenses

ACR reflects an *existing* resource's annual going-forward costs (i.e., costs that would be avoided if the unit would otherwise retire)

- Does not incorporate cost to enter market
- Reflects a resource's lower threshold to remain in market

Net CONE and Net ACR remove expected energy and ancillary service (E&AS) market revenues

- Reveals the capacity revenue necessary for a resource to remain profitable

Development of Default Offer Price Floors (Gross CONE and Gross ACR)

- PJM will develop Gross CONE and Gross ACR values for the following resource types and technology types:
  - CT, CC, Coal, Nuclear (single unit and multi-unit), Diesel, Solar, Onshore Wind, Offshore Wind and Capacity Storage Resources (Battery Storage)
  - DR (generation-backed) & DR (non-generating demand-side)
  - EE Resources
- PJM using Brattle/Sargent & Lundy to develop Gross ACR values for most generation types and Gross & Net CONE for EE
- PJM will rely on variety of relevant data sources (e.g., NREL, EIA, EPA, Lazard, Quadrennial Review, etc.*) to develop Gross CONE values
- PJM and IMM will endeavor to develop a single set of values

* links to resources in Appendix

Financial Assumptions for CONE

Expected Life	20 years
Debt	55%
Debt Rate	6.0%
Equity Rate	13.0
Tax Rate	28%
ATWACC	8.2%

Development of Default Offer Price Floors (Net CONE and Net ACR)

- Net E&AS for each generation technology type will be calculated for each zone based on hourly zonal LMPs from past three calendar years to determine 3-yr average
- Net E&AS will be subtracted from the relevant Gross CONE and Gross ACR values to determine the Net CONE and Net ACR for each generation technology type for each zone
- Default Offer Price Floor for Gen-backed DR to be set at Net CONE or Net ACR of appropriate generation type
- Default Offer Price Floor for new Non-Generation DR to be based on average DR sell offer price from last three BRAs
- Default Offer Price Floors applicable to existing EE – Establish objective M&V requirements for new EE offers and limit such offers to the verifiable level of savings

Next Steps

- Update stakeholders (via special MIC sessions) on progress made in developing Gross/Net CONE and Gross/Net ACR values applicable to each resource type and each technology type
- Develop implementation details related to DR and EE at the Demand Resource Subcommittee (“DRS”) with updates provided to the larger MIC group

Links to Resources

NREL: atb.nrel.gov

EIA: www.eia.gov/aeo
https://www.eia.gov/outlooks/aeo/assumptions/pdf/table_8.2.pdf

Lazard: https://www.lazard.com/perspective/lcoe2019
https://www.lazard.com/media/451087/lazards-levelized-cost-of-storage-version-50-vf.pdf
https://www.lazard.com/media/451086/lazards-levelized-cost-of-energy-version-130-vf.pdf

EPA: https://www.epa.gov/airmarkets/documentation-ipm-platform-v6-november-2018-reference-case-all-chapters

Quadrennial Review:
https://pjm.com/-/media/library/reports-notices/special-reports/2018/20180420-pjm-2018-cost-of-new-entry-study.ashx?la=en