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Minimum Operating Parameters Under Capacity Performance

Given FERC approval on June 9, 2015 of the PJM Capacity Performance filings in Docket Nos. ER15-623 and EL15-29, and subject to the additional Tariff and Operating Agreement revisions PJM has been directed to make by FERC in its order, PJM will be implementing unit-specific parameter limitations for Generation Capacity Resources that are committed in the Transitional Incremental Auctions for the 2016/2017 and 2017/2018 Delivery Years, and the Base Residual Auctions and Incremental Auctions for the 2018/2019 Delivery Year and subsequent Delivery Years. In order to inform Capacity Market Sellers' offers into those auctions, PJM provides this guidance with respect to the minimum operating parameters that Generation Capacity Resources will be required to meet under these new rules as defined in Tariff, Attachment K-Appendix, Section 6.6 (and the parallel provisions of Operating Agreement, Schedule 1).

Capacity Market Sellers that do not believe their individual resources can meet these minimum operating parameters due to actual operating constraints, and who desire to establish adjusted unit-specific parameters for those resources prior to the commencement of the Transitional Incremental Auctions for the 2016/2017 and 2017/2018 Delivery Years and the Base Residual Auction for the 2018/2019 Delivery Year, may request adjusted unit-specific parameter limitations by providing all the necessary data, information and documentation to PJM in order to justify the adjusted unit-specific limitations. Capacity Market Sellers should provide all data, information and documentation to support their unit-specific parameter limits to PJM at unitspecificpls@pjm.com. This email address will include an IMM email address as well. PJM will use its best efforts to provide its feedback and if possible its determination of the resource's request for adjusted unit-specific parameters to Capacity Market Sellers by no later than the commencement of the applicable auction.

The table below provides the minimum operating parameters that PJM has determined, with input from the PJM Independent Market Monitor (IMM), should apply to Generation Capacity Resources committed as Capacity Performance and Base Capacity resources in the Transitional Incremental Auctions for the 2016/2017 and 2017/2018 Delivery Years, and the Base Residual Auctions and Incremental Auctions for the 2018/2019 Delivery Year and subsequent Delivery Years. Capacity Market Sellers should determine the category into which each of their resources fits in order to determine the minimum operating parameters that will apply to their resources.

Unit Type	Min Down	Min Run	Max Daily Starts	Max Weekly Starts	Hot Start	Warm Start	Cold Start	Notification Time	Turn Down Ratio
Reciprocating Internal Combustion Units	0.5	1	12	84	0.1	0.1	0.1	0.1	1.0 or more
AERO CT Units	1	1	6	42	0.1	0.1	0.1	0.1	1.0 or more

Frame CT Units	1	2	4	28	0.25	0.25	0.25	0.1	1.5 or more
Combined Cycle Units	3	4	3	21	0.5	0.5	0.5	1	1.5 or more
Petroleum and Natural Gas Steam Units	4	4	2	24	2	3	4	1	2.0 or more
Combined Cycle Based QF Units	4	4	3	21	0.5	0.5	0.5	1	1.5 or more
Solid Fuel NUG Units	4	4	3	21	4	6	10	1	1.5 or more
Sub-Critical Coal Units	4	8	2	14	4	6	10	1	2.0 or more
Super-Critical Coal Units - Pre 2000	4	6	1	7	4	6	10	1	1.5 or more
Super-Critical Coal Units - Post 2000	4	6	1	7	2	2.5	5	1	1.5 or more

The table of default parameter limited schedule values found in Tariff, Attachment K-Appendix, Section 6.6(c) and the parallel provisions of Operating Agreement, Schedule 1 will continue to apply to Generation Capacity Resources that are currently committed as Capacity Resources but do not clear as Capacity Performance in the Transitional Incremental Auctions for the 2016/2017 and 2017/2018 Delivery Years.

Please note that the technology classifications in the table of minimum operating parameters that will apply to Capacity Performance resources have been adjusted from those listed in the table in Section 6.6(c). The technology types in the below table have been revised based in part on advice from the IMM considering the current PJM generation fleet as well as the Planned Generation Capacity Resources being constructed in the PJM territory.

Brief descriptions of the technology types are:

RICE - Reciprocating Internal Combustion Engines

AERO CT Units – 50 MW or less, including single Pratt and Whitney FT4 and FT8 units of about 20 MW, Pratt and Whitney FT4 TwinPac units of about 40 MW and Rolls Royce Trent units at 50 MW

Frame CT Units – Larger, higher output engines

Combined Cycle Units – All Combined Cycle units that are not QFs

Petroleum and Natural Gas Steam Units – PURPA Qualifying Facilities (“QF”) that are not Combined Cycle, Non-Utility Generation (“NUG”) units and traditional boiler steam generator units.

Combined Cycle Based QF Units - PURPA Qualifying Facilities (“QF”) that are Combined Cycle

Solid Fuel NUG Units - Non-Utility Generation (“NUG”) units, primarily municipal waste, biomass or waste coal fired steam boiler and STG power plants.

Sub-Critical Coal Units – traditional boiler steam generator units

Super-Critical Coal Units – Pre 2000

Super-Critical Coal Units – Post 2000

In addition, the Minimum Down Time (“MDT”) is defined as down time following a shutdown that may be needed for inspecting and securing equipment to ready the plant for a subsequent startup. This is a change from the current definition which includes the entire time from breaker open to breaker close, and therefore overlaps with startup and notification times.