



Underperformance Risk Management Senior Task Force External Capacity Performance Enhancements

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Markets & Reliability Committee

- [External Capacity Performance Enhancements](#) approved in May 2016
 - Address the operational, markets and planning challenges associated with the integration of external Capacity Performance resources in PJM
- Key discussion areas:
 - External resource modeling (electrical distance – how far is too far?)
 - Deliverability standards for both initial and future years
 - Firm Flow Entitlements/Firm Flow Limits associated with external resources entering PJM's capacity market
 - How to handle existing external resources
 - Existing external resources are any approved pseudo-tie that has cleared at least one RPM auction during the period of 16/17 Delivery Year through 19/20 Delivery Year



- The PJM package E received majority support (68.49%) in the External Capacity Performance Enhancements discussions
- Package addresses both existing and new external resources

- Operational Deliverability
 - Existing external resources will be evaluated for operational deliverability
 - An acceptable PJM operating guide/procedure may be used to ensure reliable operation
 - Existing external resources that are reliable will be operated under the current rules for 5 years as of June 1, 2016 through the 2021/2022 Delivery Year
 - By October 1 of the year preceding the applicable Delivery Year, PJM will notify existing external resource owners whether their pseudo-tie is operationally feasible
 - If Yes, the pseudo-tie is accepted for the Delivery Year
 - If No, the pseudo-tie owner can decide to either perform the required upgrades or declare the MW as non-viable

- Performance Assessment Hour penalty assessments
 - Starting in 2020/2021, assess performance at sub RTO granularity based on operational requirements
- Non-Market Area FFE Exemption
 - Impacted Non-Market Areas need to honor "Firm Status" for resources
- Beginning with the 2022/2023 Delivery Year the new rules will apply
 - The must offer requirement will be lifted for all existing pseudo-ties for the 2022/2023 BRA

- External resource owners with long term contracts with PJM load may be permitted to participate for the life of the asset
 - Evidence of a long-term contract or equivalent documented agreement with internal PJM load to sell the capacity and energy of the external resource
 - 10 years or longer and was entered into on or before June 1, 2016

- Initial and On-going Deliverability Requirements
 - The deliverability study based on the applicable standards must be reviewed and approved by PJM to ensure uniformity for internal and external resource deliverability requirements
 - Unit Specific to PJM Load + External generator deliverability
 - The standards for PJM's deliverability requirements are published in Manuals 14A and 14B
 - PJM will work with neighboring BAs to clarify the deliverability criteria and review and identify deficiencies with any studies
- Cost Allocation
 - The cost allocation methodology of the region in which the upgrade is required will be utilized for external upgrades
 - The RTEP process will be utilized for internal upgrades

- Pseudo-tie Feasibility
 - A process to determine the feasibility of a pseudo-tie will be initiated at the time the transmission service request is submitted
- External Transmission Service Evaluation
 - Long-term Firm Point to Point with rollover rights for term of the service evaluated at a unit specific level and confirmed by external Balancing Authority
- PJM Transmission Service Requirement
 - Network External Designated
 - Firm Point to Point will no longer be applicable

- Operational Modeling Requirement
 - External resources with a minimum electrical distance impedance equal to or less than 0.065 or within 1 station of a transmission bus with a minimum electrical distance impedance equal to or less than 0.065
- Seams Coordination Model Consistency
 - Network models for PJM and External Area need to be within 2% accuracy for potential coordinated flowgates
- Performance Assessment Hour penalty assessments
 - Starting in 2020/2021, assess performance at sub RTO granularity based on operational requirements

- New Flowgate Requirements
 - There must be at least one flexible internal PJM generator with at least 1.5% impact on any new potential flowgate as a result of the pseudo-tie
- Firm Flow Entitlement (FFE)/Firm Flow Limit (FFL) Requirements
 - The FFE/FFL for flowgates must transfer ownership to PJM from Host Entity
 - External Capacity in BAs that are part of the Congestion Management Process is biddable only up to quantity at which FFEs or FFLs are assigned to PJM
- Tagging Requirements
 - External Units impacting non-CMP BAs must have agreement from non-CMP BA that the pseudo-tie does not require tagging

- Manual and Governing Document Changes
 - Manuals
 - Governing Documents
- MRC/MC Endorsement
 - Seeking MRC and MC endorsement on the same day at the January 26, 2017 meeting