



# FERC Rulings For External Generation Capacity Resources and NERC Guidance for Dynamic Transfers

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## FERC Rulings For External Generation Capacity Resources

- Establishment of Capacity Performance Resources
  - ER15-623
- External Capacity Performance Enhancements
  - ER17-1138

## NERC Guidance for Dynamic Transfers

- Dynamic Transfer Reference Document (Version 4)



# FERC Rulings



# Establishment of Capacity Performance Resources

- Docket No: ER15-623
- PJM Filing: December 12, 2014
- FERC Acceptance: June 9, 2015
  
- This filing proposed changes to the Reliability Assurance Agreement Among Load Serving Entities (RAA) and the PJM Open Access Transmission Tariff (Tariff) to establish a new capacity product (Capacity Performance Resource) to provide greater assurance of delivery of energy and reserves during emergency conditions. It introduced incentives and penalties for resource performance.

RAA <https://www.pjm.com/directory/merged-tariffs/raa.pdf>

Tariff <https://www.pjm.com/directory/merged-tariffs/oatt.pdf> (Attachment DD, Sections 5.5A, 6 and 10A)

- ER15-623
  - FERC recognized the need to address resource performance in other regions as well and directed RTOs and ISOs to report their efforts to address fuel assurance issues and provided guidance to assist RTOs and ISOs with these efforts.
  - PJM's proposed reforms were prepared in the context of these policy initiatives and designed to ensure that resources committed as capacity to meet PJM's reliability needs will deliver the promised energy and reserves when called upon in emergencies, providing the reliability that the region expects and requires.

- ER15-623
  - proposed to establish charges for poor performance (Non-Performance Charges) and credits for superior performance (Performance Bonus Payments), a must-offer requirement as applicable to Capacity Performance Resources, and a transition mechanism to remain in effect through May 31, 2020.
  - proposed for PJM to procure 100 percent of the region's capacity resources as Capacity Performance Resources, including all applicable External Generation Capacity Resources.
    - PJM proposed that External Generation Capacity Resources be required to represent that it meets the criteria for obtaining an exception to the Capacity Import Limit (CIL), meaning that they must establish a Pseudo-Tie and be subject to the same obligations imposed on Generation Capacity Resources located in the PJM Region.



# External Capacity Performance Enhancements

- Docket No: ER17-1138
- PJM Filing: March 9, 2017
- FERC Acceptance: November 17, 2017
  
- This filing proposed revisions to the RAA and the Tariff to implement enhancements to the rules governing generation resources physically located outside of the PJM Region that serve as capacity for loads in the PJM Region. It addressed specific modeling, congestion management, planning, and operational concerns with existing Pseudo-Tie rules and aimed to ensure fair treatment of both internal and external capacity resources.

RAA <https://www.pjm.com/directory/merged-tariffs/raa.pdf>  
Tariff <https://www.pjm.com/directory/merged-tariffs/oatt.pdf>

(Schedule 10)  
(Attachment DD, Sections 5.5A and 10A)



# External Capacity Performance Enhancements

- ER17-1138
  - built on previous changes already approved by FERC to facilitate PJM's reliance on external capacity.
  - was a direct result of collaboration with stakeholders from the Underperformance Risk Management Senior Task Force (URMSTF) and received a majority vote at the MRC prior to filing.
  - included collaboration with MISO through
    - nearly two years of presentations to stakeholders at PJM-MISO Joint and Common Market Initiative meetings.
    - coordinated Tariff changes and filings with FERC requesting acceptance of mutually agreeable Joint Operating Agreement (JOA) provisions to accommodate operational and implementation of Pseudo-Ties between PJM and MISO.



- ER17-1138
  - became retroactively effective on May 9, 2017 for the Base Residual Auction (BRA) beginning May 10, 2017 which secured capacity for the June 1, 2020 Delivery Year.
  - included a five-year transition period beginning with the June 1, 2017 Delivery Year for pre-existing Pseudo-Ties to meet compliance with these new standards.
    - Alternatively, existing resources could be grandfathered as Pseudo-Ties if they were (1) owned by a Load Serving Entity and used to self-supply or (2) the subject of a contract for energy or capacity or equivalent written agreement, where either was entered into on or before June 1, 2016.



# External Capacity Performance Enhancements

- Energy Management System (EMS) Modeling
  - Detailed and robust modeling of external bulk electric system (BES) for distant resources can require the EMS to observe and monitor a much greater area increasing the risk of errors that result when PJM's model of the external BES does not continually keep pace with the physical changes to the external BES.
  - Resulted: Electrical Distance Test; Seams Coordination Model Consistency
- Congestion Management
  - The addition of Pseudo-Ties requires management of more coordinated flowgates in adjacent market areas under a joint congestion management process or a need to develop arrangements to avoid resource-tagging in non-market areas as required by NERC standards in order to maintain PJM's ability to dispatch external resources similar to internal resources.
  - Result: Market-to-Market Flowgate Test; Transfer of Firm Allocation Eligibility
- Unit-Specific Deliverability To Loads
  - Differences in how PJM assesses unit-specific deliverability to loads versus how other transmission providers may assess deliverability in their analyses to grant transmission service to resources exporting out of their region exist. This creates disparity between the deliverability assessment of internal and external capacity resource.
  - Result: Planning Eligibility Criteria



# NERC Guidance

- NERC published the Dynamic Transfer Reference Document, approved by its Operating Committee, to encourage consistency in the industry on responsibilities, requirements, and expectations placed upon parties involved in establishing a Dynamic Transfer.
- By definition, according to NERC, the provision of the real-time monitoring, telemetering, computer software, hardware, communications, engineering, energy accounting, and administration required to electronically move all or a portion of the real energy services associated with a generator out of one BA into another is a Dynamic Transfer.
- There are two types of Dynamic Transfers
  - Dynamic Schedule
  - Pseudo-Tie (required for participation in PJM markets as a Capacity Performance Resource)

[https://www.nerc.com/comm/OC/ReferenceDocumentsDL/Dynamic Transfer Reference Document v4.pdf](https://www.nerc.com/comm/OC/ReferenceDocumentsDL/Dynamic%20Transfer%20Reference%20Document%20v4.pdf)



# Attaining BA Pseudo-Tie Obligations and Requirements

As the Attaining BA when establishing a Pseudo-Tie, PJM has the following obligations and requirements. With the responsibility to ensure that these are met, PJM remains observant of the modeling, congestion management, planning, and operational concerns addressed in FERC Docket Nos. ER15-623 and ER17-1138.

- Generation planning and reporting and outage coordination
- Operational responsibility and BA services
- System Modeling
  - A Pseudo-Tie must be modeled to be included in the actual net interchange term for ACE calculations to be compliant with NERC standards.
  - PJM's network model must be expanded to at least the location of the source/sink of the Pseudo-Tie and its surrounding buses to ensure that the market flow reported is reflective of the system conditions throughout the path of the transfer and is inclusive of external areas on that path. PJM must also be able to achieve any relief obligation that may be assigned as a result of the Pseudo-Tie.
- Firm Transmission
  - A Pseudo-Tie must use firm transmission for the entire path from the resource to PJM load. Transmission service should be studied with the points of receipt and points of delivery reflecting the specific location of the generator being Pseudo-Tied.