

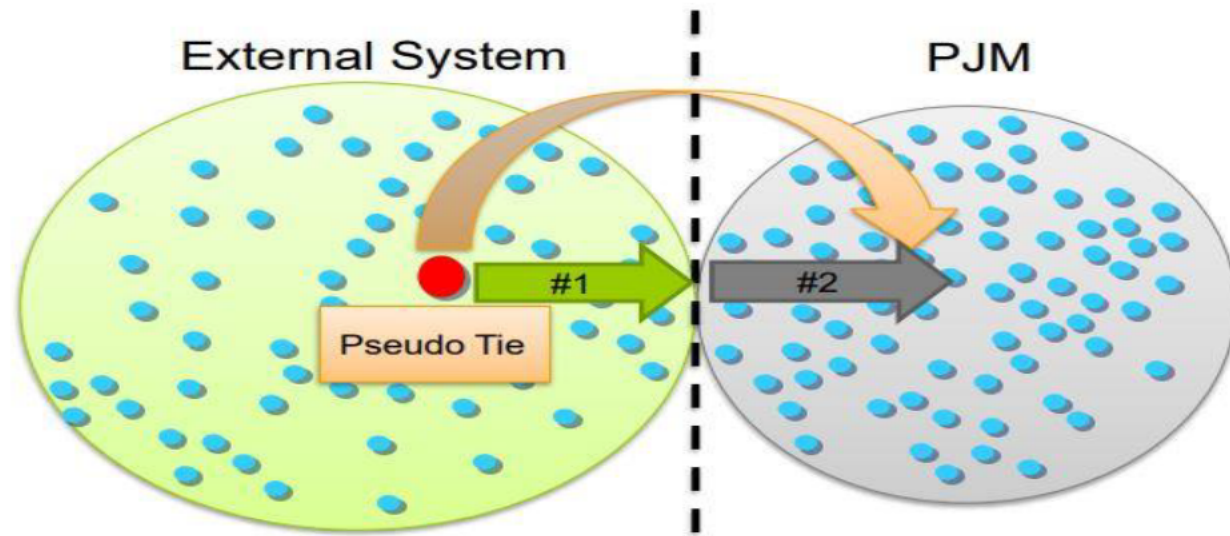


HVDC Senior Task Force: PJM Planning Criteria for Pseudo-Ties & Merchant Transmission Facilities

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Interconnection Analysis
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- 2 of the requirements for external resources that wish to participate in PJM's capacity market (to become a PJM Pseudo-Tie) are evaluated by PJM Planning:
 1. Transmission service requirement to obtain long term firm (LTF) transmission service, specifically Firm Network External Designated Service (NEDS) with rollover rights (unit specific).
 - a. Accomplished via PJM OASIS request and then being included in the PJM New Services Queue and assigned a PJM queue position.
 2. Planning Eligibility Criteria must be met which allows PJM to determine if generation seeking to Pseudo-Tie into PJM is deliverable and similar in its deliverability when compared to generation directly connected to the PJM system.

1. PJM LTF requests which enter the PJM Queue – evaluated for impacts to the PJM transmission system.
2. Planning Eligibility Criteria – PJM review of the analyses performed to evaluate the systems outside PJM's footprint.



- PJM LTF Requests which enter the PJM Queue:
 - Evaluate and identify impacts to the PJM transmission system.
 - Subjected to the same PJM Generator Deliverability Test as other New Service Requests in the queue such as generation interconnection and merchant transmission interconnection requests.
 - PJM uses the following thresholds for LTF requests seeking to import energy into PJM: 3% distribution factor or 3% impact/flow increase on a facility to select the LTF service which shall be allowed to contribute to flowgates under study.
 - Reference: PJM Manual 14B, Attachment C, Addendum 3
 - This analysis models and sources the MWs from the actual/specific Point of Interconnection (POI) where the external generating plant (pseudo-tie unit) is injecting its MWs into the grid. These MWs are sunk to the entire PJM system to ensure they are deliverable across all PJM tie lines and across facilities within PJM.
 - The modeling of the specific source/plant location is key to calculate accurate distribution/shift factors from the external generator and measure its sensitivity on PJM facilities.

- Planning Eligibility Criteria:
 - Reference: PJM Manual 12, Attachment F
 - PJM review of the analyses performed to evaluate the systems outside PJM's footprint.
 - This review ensures that the MWs from the POI of the external pseudo-tie unit can be reliably transferred across the external system(s) and delivered to the PJM system border.
 - This review allows PJM to determine if the studies conducted on the external system(s) meet, or are similar to, the deliverability requirements associated with capacity resources seeking to connect directly to the PJM system.
 - The goal here is to ensure the pseudo-tie unit is deliverable to the PJM system and that no external system transmission constraints will exist while considering PJM Planning criteria.
 - It would not benefit PJM if the pseudo-tie unit is deliverable on the PJM system but not deliverable across the external transmission system per PJM criteria. PJM needs to ensure there are no external transmission constraints which may inhibit the deliverability of the pseudo-tie unit and cause the pseudo-tie unit to possibly be curtailed when PJM is relying on its capacity.

- Connect a controllable Merchant Transmission facility (i.e. HVDC, PAR, VFT) between PJM and another control area.
- Submit an application to enter the PJM New Services Queue
- Can request Transmission Withdrawal rights (firm or non-firm) and/or Transmission Injection rights (capacity or energy).
- Subjected to the same PJM Generator Deliverability Test as other New Service Requests in the queue such as generation interconnection and LTF transmission service requests.
- Also subjected to other PJM Planning criteria tests, as applicable, depending on the specific types of rights being requested.
 - PJM Load Deliverability Test, N-1-1 analysis, etc.