

capacity resources cannot be full substitutes for internal capacity resources, they are inferior products and should not be permitted in the PJM capacity market because they will suppress the price for internal resources and result in an inefficient market outcome. That is counter to the interests of the PJM market, counter to the interests of PJM generation and counter to the interests of PJM load.

A pseudo tie should be a minimum requirement for external capacity resources to offer in the PJM capacity market. A pseudo tie is a necessary but not sufficient condition to be a full substitute for internal capacity resources. A pseudo tie gives PJM dispatch control over the energy from capacity resources and ensures that the energy output belongs to PJM by incorporating that energy output in PJM's Area Control Error (ACE).

B. The Market Monitor Supports the Continued Use of Pseudo Ties and PJM's Proposed Improvements to the Pseudo Tie Standards for Governing External Generation Capacity Resources.

PJM currently requires all external capacity resources to be pseudo tied. Since the implementation of the Capacity Import Limit (CIL) rules in 2014 for the 2017/2018 delivery year, which required capacity imports to be pseudo tied, 35 pseudo ties, representing 30 units at 13 plants have been implemented. More pseudo tied resources have cleared for subsequent delivery years.

PJM confirms the benefits of pseudo tied external capacity resources but recognizes that experience with pseudo tied capacity resources has revealed issues that need to be addressed in the areas of modeling, congestion management, planning and operations. The March 9th Filing proposed new rules to address the identified issues.

The Market Monitor supports most of the elements of PJM's proposed rules, including:

- M2M Flowgate Test. PJM must have at least one internal generation resource that can be dispatched to reduce congestion on any new coordinated flowgate created as a result of a pseudo tie.

- Model Consistency Requirement. External Balancing Authorities with a congestion management agreement (CMA) must maintain network models that produce results for flowgates created to manage pseudo ties that are consistent with PJM results.
- Tagging Assurances. An external capacity resource cannot be subject to NERC tagging and the associated potential to be interrupted under TLR processes.
- Firm Flow Entitlements. PJM load must be assigned the firm flow entitlement allocation from coordinated flowgates created to support a pseudo tie.
- Reliability Pricing Model (RPM) Must Offer Requirement. External Capacity Market Sellers must commit to the same RPM must offer requirements as internal units.
- Capacity Market Performance Penalties. External generation capacity resources should pay nonperformance penalty charges at the same locational level as internal capacity resources if the external resource could have helped resolve a declared emergency action.
- Deliverability. The requirement for external capacity resources to secure transmission service that fully supports deliverability of capacity from the external resource to PJM load in a manner that is comparable to the deliverability of internal capacity resources to PJM load.
- Electrical Distance. The requirement that external generation capacity resources be within a defined electrical distance of PJM.

The additional rules proposed by PJM are an improvement on the status quo, but some proposed rules do not fully resolve the issues raised by the role of pseudo tied units in the PJM Capacity Market. The Market Monitor offers additional comments and recommendations to help such a resolution.

C. PJM's Proposed Electrical Distance Requirements for Pseudo Ties Are Not Adequate.

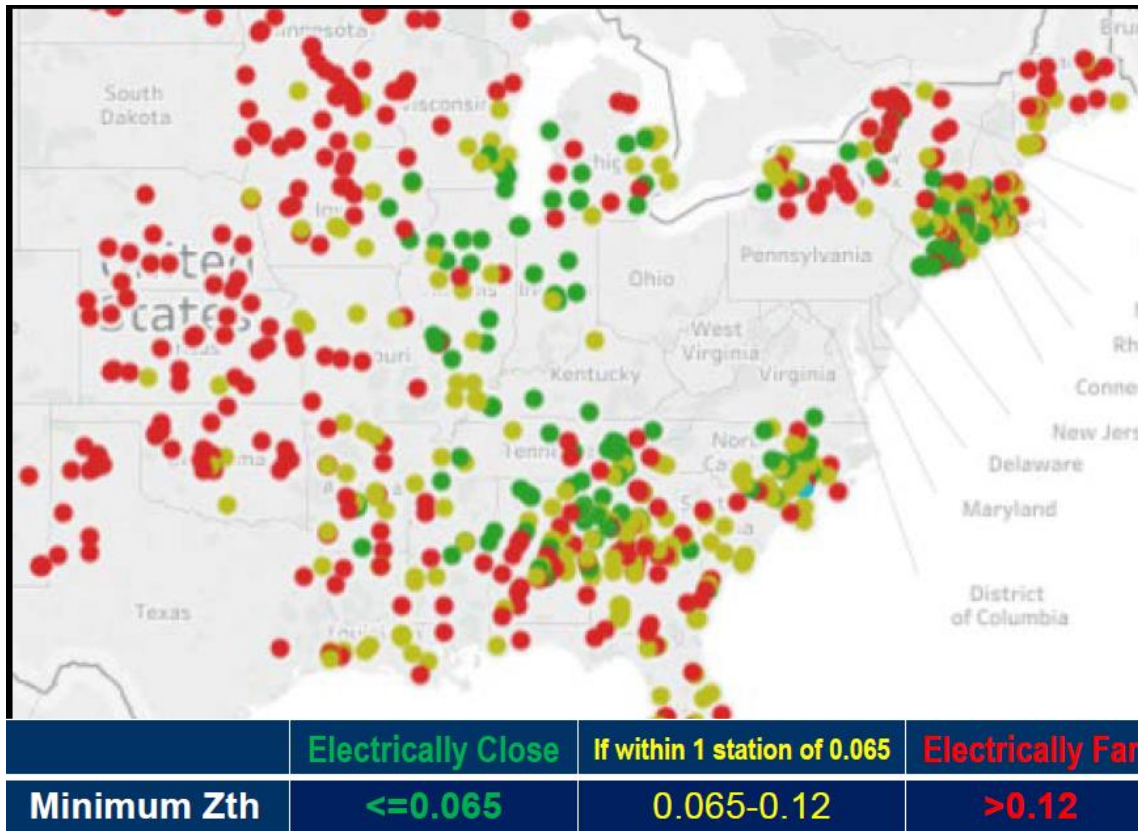
To address the operational and reliability attributes of external capacity resources, PJM proposed that external capacity resources be permitted only if they are located within a defined level of a metric that PJM calls Electrical Distance impedance. The metric measures the electrical impedance between an external generator and the nearest PJM substation.³ The March 9th Filing proposes (at 14) a requirement that for an external resource to be eligible to be a PJM capacity resource, it must have “a minimum Electrical Distance impedance equal to or less than 0.065 Ω ; or is within one station of the transmission bus that has a minimum Electrical Distance impedance equal to or less than 0.065 Ω .”

Figure 1 shows the map of electrical distances created by PJM and presented at the October 20, 2016, meeting of the Underperformance Risk Management Senior Task Force (URMSTF).⁴ The map illustrates the implausibility of PJM's Electrical Distance impedance metric as a measure of whether an external capacity resource can substitute for an internal PJM capacity resource.

³ See PJM, Operational Modeling (Electric Distance) Related Questions (December 7, 2016), which can be accessed at: <<http://www.pjm.com/~media/committees-groups/task-forces/urmstf/20161207/20161207-item-03-electrical-distance-update.ashx>>.

⁴ See PJM, “Electrical Distance Calculator Update,” PJM presentation to the URMSTF (October 20, 2016), which can be accessed at: <<http://www.pjm.com/~media/committees-groups/task-forces/urmstf/20161020/20161020-item-05-electrical-distance-update.ashx>>.

Figure 1 Electrical Distance Map



PJM did not adequately explain the basis for arriving at the threshold (0.065 Ω) for Electrical Distance impedance. The Market Monitor does not support PJM’s proposed use of Electrical Distance impedance as a key criterion to be an external capacity resource.

The Market Monitor believes that the qualifying criteria for an external capacity resource should be that the resource is a full substitute for internal capacity resources, meaning that an external capacity resource must provide the same reliability and operational attributes as internal capacity resources. The exact electrical distance requirement should be based on these criteria. It is clear that PJM’s proposed metric is not consistent with these principles.

D. PJM’s Proposed Deliverability Requirements for External Capacity Resources Are An Improvement But Not Fully Comparable to Internal Capacity Resources.

The Market Monitor supports the requirement that external capacity resources have transmission service that supports deliverability to PJM load comparable to the

deliverability requirements for internal capacity resources. The March 9th Filing proposes (at 17) to require external resources to arrange for Network External Designated Transmission Service, which is equivalent to the service PJM proposes to require for internal generation.

However, PJM's evaluation of deliverability for internal resources differs from that for external resources. In the PJM capacity market, the deliverability of internal resources to PJM load explicitly takes into account the internal transmission constraints. This is basis for the fundamental locational nature of the PJM capacity market. PJM does not use the same standards for external capacity resources. As a result, the external pseudo tied resources cannot be considered to be substitutes for internal PJM resources. External capacity resources should meet the same deliverability standards as internal resources.⁵

E. Cost Responsibility for Transmission Upgrades Should Be Clear.

The March 9th Filing is silent on the cost responsibility for upgrades that may be required in external regions as a condition for the approval of firm transmission in those regions. PJM should ensure that the rules clearly assign cost responsibility for such upgrades solely to the external generation owner who requests Network External Designated Transmission Service.

F. The Proposed Transition Plan for External Capacity Resources That Previously Qualified for a CIL Exception Is Too Long.

It is not appropriate to allow existing external generation capacity resources to be noncompliant with the new rules through the 2021/2022 Delivery Year. The new rules are being established to ensure that external capacity resources do not suppress prices in the PJM capacity market. Excusing some external resource from compliance with the new rules is discriminatory treatment, and is therefore not just and reasonable.

⁵ PJM's deliverability standards are defined in: PJM Manual 14b (PJM Region Transmission Planning Process) Rev. 36 (November 17, 2016).

The RPM must offer requirement should be lifted for all existing external capacity resources that do not meet the new standards.

G. There Should Be No Grandfathered Arrangements Which Allow Discriminatory Treatment for Certain Market Sellers.

The March 9th Filing provides the opportunity for a seller to continue to avoid the new pseudo tie requirements for up to 30 years or more, depending on contract or resource life. The March 9th Filing proposes (at 18) that the exception would apply to “prior CIL Exception External Resources that are either: owned by a Load Serving Entity and used to self-supply (under arrangements initiated before June 1, 2016, with a duration of at least years) such entity’s PJM Region load or (2) the subject of a contract for energy or capacity or equivalent written agreement entered into on or before June 1, 2016 for a term of ten years or longer with a purchaser that is an internal PJM load customer.” In the first scenario, the seller would be allowed to continue the exception for the life of the resource. In the second scenario, the seller is allowed to continue the exception for the entire term of the relevant agreement.

The grandfathered arrangements are unnecessary and will have negative impacts on both the economics and reliability of the PJM markets. The arrangements are unnecessary because the RPM auctions provide the parties with alternatives to their current supply arrangements. If the resources are unable to meet the new criteria for external capacity resources, then the future obligations can be covered by purchasing capacity in an RPM auction. The grandfathering will degrade the reliability and economics of the PJM markets by allowing certain external resources, unable to meet the standards met by other capacity performance resources, to offer into the RPM auctions as capacity performance resources. The grandfathering also provides a cost advantage which may allow these resources to displace internal generation that must meet all market standards.

It is not appropriate to allow existing external generation capacity resources to be noncompliant with the new rules through the 2021/2022 Delivery Year. The new rules are being established to ensure that external capacity resources do not suppress prices in the

PJM capacity market. Excusing some external resource from compliance with the new rules is discriminatory treatment, and is therefore not just and reasonable.

H. External Capacity Resources and Associated Nonperformance Penalty Modifications Should Be Mapped to a Specific LDA.

The Market Monitor agrees that external generation capacity resources should pay nonperformance penalty charges at the same locational level as internal capacity resources if the external resource could have helped resolve a declared emergency action. PJM's proposed language leaves the criteria undefined and relies on PJM's judgment. The criteria should be objective and defined in the market rules. Currently, penalty charges are assessed for nonperforming external resources only if the emergency action was declared for the entire PJM Region.⁶ For internal resources, penalty charges are assessed for all nonperforming resources located in the area defined by the emergency action, which could be within a single Locational Deliverability Area (LDA) or multiple LDAs.⁷

Despite the approach to nonperformance penalties that recognizes the link of external capacity resources to LDAs, external resources are not linked to specific LDAs in the capacity market auctions and do not meet the reliability needs of specific LDAs. If an external capacity resource can provide the same reliability and operational attributes as internal capacity resources then it must be mapped to a specific LDA where those conditions are met. If an external capacity resource cannot be mapped to an LDA it cannot meet the same reliability and operational attributes as internal capacity resources, all of which are in specific LDAs. In that case, such a resource cannot be considered a direct

⁶ See PJM Manual 18 (PJM Capacity Market), Rev. 36 (December 22, 2016) at 158.

⁷ *Id.*

substitute for PJM internal resources and therefore should not be qualified as a capacity resource.⁸

PJM's proposal would lead to situations in which external resources that were not mapped to an LDA and did not help meet the reliability requirement of the LDA would be required to either respond to an emergency action in that region or incur penalty for nonperformance.

II. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to these comments as it resolves the issues raised in this proceeding.

Respectfully submitted,



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⁸ See Monitoring Analytics, LLC "Analysis of the 2019/2020 RPM Base Residual Auction," <http://www.monitoringanalytics.com/reports/Reports/2016/IMM_Analysis_of_the_20192020_RPM_BRA_20160831-Revised.pdf> (March 28, 2017)

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 30th day of March, 2017.



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