

161 FERC ¶ 61,197
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Cheryl A. LaFleur, and Robert F. Powelson.

PJM Interconnection, L.L.C.

Docket Nos. ER17-1138-000
ER17-1138-001

ORDER ON TARIFF REVISIONS

(Issued November 17, 2017)

1. On March 9, 2017, pursuant to section 205 of the Federal Power Act (FPA),¹ as amended on September 17, 2017, PJM Interconnection, L.L.C. (PJM) filed revisions to its Open Access Transmission Tariff (Tariff) and Reliability Assurance Agreement (RAA) to: (1) establish pseudo-tie requirements for new external resources that wish to participate in PJM's forward capacity auctions; and (2) a transition period with deliverability requirements to allow for existing pseudo-tied resources that had previously cleared a forward capacity auction to comply with the new requirements.

2. As discussed further below, we accept PJM's proposal, to become effective May 9, 2017, subject to conditions, and require PJM to submit a further compliance filing within 30 days of the date of this order.²

I. Background

3. In 2014, the Commission approved a PJM proposal that established limits on the amount of capacity from external generation resources (Capacity Import Limit) that can be reliably committed in the PJM forward capacity auctions.³ Under that proposal, an

¹ 16 U.S.C. § 824d (2012).

² The United States Court of Appeals for the District of Columbia Circuit has held that, in certain circumstances, the Commission has "authority to propose modifications to a utility's [FPA section 205] proposal *if the utility consents to the modifications.*" *NRG Power Mktg., LLC v. FERC*, 862 F.3d 108, 114-15 (D.C. Cir. 2017).

³ *PJM Interconnection, L.L.C.*, 147 FERC ¶ 61,060 (2014) (CIL Order), *order on reh'g*, 150 FERC ¶ 61,041 (2015).

external generation resource that wishes to participate in the PJM Base Residual Auction can obtain an exception from the PJM Capacity Import Limit.⁴ To qualify for this exemption to the Capacity Import Limit, an external resource must meet three conditions: (1) it must be committed to being a pseudo-tied generation resource prior to the start of the Delivery Year; (2) it must have long-term firm transmission service confirmed on the complete transmission path from such resource into PJM; and (3) it must agree to be subject to the same capacity must-offer requirement as PJM's internal generation resources.⁵

4. In 2015, as part of broader capacity market reforms by PJM (the Capacity Performance Proposal), the Commission accepted PJM's proposal that, in order to qualify as a Capacity Performance Resource, an external generation resource *must* meet the conditions for obtaining an exception to the Capacity Import Limit.⁶ As a result, when PJM began procuring 100 percent Capacity Performance Resources in the May 2017 Base Residual Auction (for the 2020/2021 Delivery Year), the Capacity Import Limit became null, since all external generation resources needed to obtain an exception to the Capacity Import Limit.⁷

5. PJM states that relying on a large number of external pseudo-tied resources has revealed several complications. According to PJM, incorporating more distant external pseudo-tied resources into PJM has increased the risk of errors in the Energy Management System (EMS) model and posed congestion management problems.⁸ PJM explains that it has encountered challenges with pseudo-ties being accurately modeled during real-time assessments of its system due to: (1) modifications to the external physical bulk electric system that are not reflected in PJM's EMS model; (2) unplanned and planned outages of data links with external entities; and (3) external telemetry data quality and availability. PJM also does not have the ability to model all generator impacts for qualifying external market-to-market flowgates. Since PJM's day-ahead market model mimics the EMS, any data input failure results in a real-time market data failure, which can lead to inefficient constraint control and creates reliability and

⁴ A separate Capacity Import Limit is established for each of the five external source-zones and a single total Capacity Import Limit is established for the entire RTO.

⁵ CIL Order, 147 FERC ¶ 61,060 at P 36.

⁶ *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208 (2015) (Capacity Performance Order), *order on reh'g*, 155 FERC ¶ 61,157 (2016).

⁷ Capacity Performance Order, 151 FERC ¶ 61,208 at PP 96-97.

⁸ PJM Transmittal at 6.

compliance risks for PJM and its members. PJM explains that these challenges increase in both probability and frequency as an external resource's electrical distance from PJM increases.⁹

II. PJM's Filing

6. PJM proposes revisions to the rules governing pseudo-tie resources to address concerns associated with modeling, congestion management, and the planning and operation of pseudo-tie resources. Specifically, the proposed rules intend to ensure that external resources providing capacity to PJM load meet the same technical standards and requirements for deliverability as internal resources.¹⁰

7. PJM proposes that a seller of an external resource may submit a Sell Offer in a PJM capacity auction only if it demonstrates to PJM—five days prior to the auction—that the resource meets the following pseudo-tie requirements: (1) meets the minimum electrical distance requirements established in the PJM manuals; (2) meets a market-to-market flowgate eligibility test that will only require PJM to coordinate a new flowgate with an external Balancing Authority¹¹ when the flow impact of a PJM internal generation resource on that flowgate meets a certain threshold; (3) receives approval from an external Balancing Authority that an external Capacity Market Seller's resource does not require NERC tagging and that firm flow allocations associated with any coordinated flowgates applicable to the external resource be allocated to PJM; (4) ensures that each external entity with which PJM may be required to coordinate flowgates maintains a network model that produces results that are within two percent of the results produced by PJM's model; (5) has arranged for long-term firm point-to-point transmission service that is evaluated for deliverability from the unit-specific physical location to PJM load;

⁹ *Id.* at 7-8.

¹⁰ *Id.* at 2, 4, 21.

¹¹ A Balancing Authority is defined as “The responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.” *See Glossary of Terms Used in NERC Reliability Standards*, North American Electric Reliability Corporation available at www.nerc.com/files/glossary-of-terms.pdf.

and (6) retains the same must-offer requirement as required under the Capacity Import Limit exemption.¹²

8. For pseudo-tied resources approved prior to the Capacity Import Limit exception,¹³ PJM proposes requirements that the external resource must remain “operationally deliverable” and that the resource be tested for operational deliverability each year. PJM also proposes to phase in these new requirements for pseudo-tied resources that have cleared a previous Base Residual Auction over a five-year transition period. In the event that a pseudo-tied resource cannot meet the operational deliverability standards, PJM will notify the seller of the resource no later than October 1 immediately preceding the Delivery Year. PJM will then give the external resource the option to: (1) take any necessary steps to meet the new requirements; (2) be relieved of its capacity obligation and must-offer obligation, forgoing any capacity market revenues; or (3) procure, purchase, or replace the capacity.¹⁴

9. For Non-Performance Penalties on external resources, beginning in the 2020/2021 Delivery Year, PJM proposes to assess performance at sub-regional transmission organization granularity and base the assessment on whether resources have helped resolve a declared Emergency Action, rather than on whether an Emergency Action had been declared for the entire PJM Region.¹⁵

III. Notices of Filings and Responsive Pleadings

10. Notice of PJM’s initial filing in Docket No. ER17-1138-000 was published in the *Federal Register*, 82 *Fed. Reg.* 14,359 (2017), with protests and interventions due on or before March 30, 2017. Entities that filed motions to intervene in the proceeding are listed in Appendix B.

¹²PJM Transmittal at 13.

¹³ See CIL Order, 147 FERC 61,060 at P 50.

¹⁴ PJM Transmittal at 17-20.

¹⁵ *Id.* at 20. An Emergency Action is defined as any emergency action for locational or system-wide capacity shortages that either utilizes pre-emergency mandatory load management reductions or other emergency capacity, or initiates a more severe action including, but not limited to, a Voltage Reduction Warning, Voltage Reduction Action, Manual Load Dump Warning, or Manual Load Dump Action. PJM Tariff, Definitions – E – F.

11. Comments and/or protests were filed in the proceeding by: East Kentucky Power Cooperative and the Dayton Power and Light Co. (Dayton and EKPC), PJM Power Providers Group (P3), the Independent Market Monitor for PJM (PJM IMM), American Electric Power Service Corp. (AEP), Potomac Economics, Ltd. (MISO IMM), Illinois Attorney General on behalf of the People of the State of Illinois (Illinois AG), North Carolina Electric Membership Corp. (NCEMC), Dynegy Marketing and Trade and Illinois Power Marketing Co., (Dynegy), Tilton Energy LLC, Indicated Suppliers (Dynegy and Tilton, together), New York Independent System Operator, Inc. (NYISO), American Municipal Power, Inc. (AMP), American Wind Energy Association (AWEA), Tatanka Wind Power, LLC (Tatanka), Brookfield Energy Marketing, LP (Brookfield), Illinois Municipal Electric Agency (IMEA), Exelon Corp. (Exelon), Duke Energy Corp. (Duke), and ITC Lake Erie Connector (ITC Lake Erie).

12. Answers to comments and protests were filed by Exelon, the PJM IMM, the New York Transmission Owners (NYTOs), the Independent Power Producers of New York (IPPNY), PJM, and Brookfield.

13. A comment proposing a technical conference was filed by Midcontinent Independent System Operator, Inc. (MISO). Responses were filed by AMP, Northern Illinois Municipal Power Agency (NIMPA), and PJM.

14. On May 5, 2017, Commission staff issued a deficiency letter seeking additional information from PJM regarding coordination of pseudo-ties with external Balancing Authorities, PJM's various proposed engineering tests and requirements, PJM's proposed Operational Deliverability standard, the proposed transition period, and how PJM would deal with non-performance penalties. PJM requested a ninety day extension to respond to the Commission's deficiency letter, which the Commission granted on June 2, 2017.

15. On September 18, 2018, PJM filed its response to the Commission staff's May 5, 2017 deficiency letter (PJM Deficiency Response) in Docket No. ER17-1138-001. Notice of the response was published in the *Federal Register*, 82 Fed. Reg. 44,767 (2017), with comments due on October 10, 2017. Comments and protests regarding PJM's deficiency letter response were filed by AMP, Brookfield, NCEMC Tilton, IMEA, American Energy Economy (AEE), and PJM.

IV. Discussion

A. Procedural Matters

16. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2017), the timely, unopposed motions to intervene serve to make the entities that filed them parties to the proceedings in which they were filed. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R.

§ 385.214(d), the Commission will grant the motions to intervene out-of-time given the parties' interests in the proceeding and the absence of undue prejudice or delay.

17. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure prohibits an answer to a protest unless otherwise ordered by the decisional authority. We will accept the parties' answers because they have provided information that has assisted us in our decision-making process.

B. Substantive Matters

18. We accept PJM's proposal, to become effective May 9, 2017, subject to conditions, as discussed below. We find that under PJM's new Capacity Performance construct, these revisions should help ensure that external resources bidding into the auction are comparable to internal resources in assuring that they will be deliverable to PJM's system when needed. We discuss each of the contested issues below.

1. Barriers to Entry

a. PJM's Filing

19. With its Pseudo-tie Enhancement filing, PJM seeks to impose various engineering requirements and tests on external resources to ensure the reliable delivery of external capacity into PJM.

b. Comments and Protests

20. AEP, P3, Duke, Exelon, Dayton and EKPC, and the PJM IMM filed generally supporting comments and request that the Commission accept PJM's proposal because it will help to address the modeling, congestion management, planning, operational, and reliability concerns that have resulted from an increased number of pseudo-tied resources and because they will improve comparability between internal and external resources.

21. While supportive of using pseudo-ties as the minimum requirement for external capacity seeking to offer in PJM's capacity market, the PJM IMM believes that external capacity resources must be full substitutes for internal capacity resources.¹⁶ The PJM IMM argues that PJM's proposed deliverability requirements for external resources are an improvement, but do not provide for equal treatment compared with internal resources because PJM's evaluation of internal capacity resources takes into account internal

¹⁶ PJM IMM Comments at 1-2.

transmission constraints and PJM does not use the same standards for external resources.¹⁷

22. AMP, AWEA, Brookfield, Dynegy and Tilton, IMEA, the MISO IMM, NCEMC, and NYISO contest PJM's proposal, arguing that it creates barriers to entry for external sellers seeking to participate in PJM's capacity auctions. Tatanka argues that PJM's new measures unduly discriminate against external generators because the measures are not needed to ensure reliable participation by external generators in a robust capacity market.¹⁸ IMEA argues that the new requirements impose barriers to entry without compelling justification and many of the tariff changes are unduly discriminatory.¹⁹ NCEMC argues that these barriers to entry create a preference for internal capacity resources.²⁰ Brookfield argues that the Commission has previously rejected barriers to market entry by external resources in other contexts,²¹ and that the Commission has directed MISO and PJM to increase, rather than stifle, capacity portability between the markets.²² Dynegy and Tilton argue that it is not just and reasonable to limit participation by external resources due to factors beyond their control, when such coordination issues could more appropriately be resolved between PJM and other Balancing Authorities. AMP encourages PJM and MISO to work together with stakeholders on pseudo-ties and avoid erecting further barriers to competition.²³

¹⁷ *Id.* at 5-6.

¹⁸ Tatanka Protest at 4.

¹⁹ IMEA First Protest at 30.

²⁰ NCEMC First Protest at 7.

²¹ Brookfield First Protest at 19 (citing *Southwest Power Pool, Inc.*, 121 FERC ¶ 61,029, at P 23 (2007)) (“[T]his significant financial obligation will unreasonably deter external generators from entering the market.... The Commission finds SPP's tariff revisions to be unjust and unreasonable, as the financial burdens of external generators are too significant to satisfy the requirements of the March 20 Order.”).

²² *Id.* at 20 (citing *Midwest Indep. Transmission Sys. Operator, Inc.*, 139 FERC ¶ 61,199, at PP 330-332 (2012)) (“[W]e direct Commission staff to solicit comment on the issue of capacity portability between MISO and PJM, including an examination of administrative rules that may act as barriers to capacity transfers across the MISO/PJM seam and potential solutions.”).

²³ AMP Protest at 3.

23. The MISO IMM contends that the proposed rules governing external resources to PJM create absolute, inefficient barriers to capacity trading that will raise costs to PJM's customers.²⁴ The MISO IMM requests that the Commission reject all of the proposed restrictions on pseudo-ties in this proceeding. The MISO IMM describes an alternative proposal that it will describe in a separate section 206 complaint that will contain an efficient alternative that could be implemented to achieve PJM's objectives.²⁵

c. Answers

24. Exelon states that while it agrees that barriers to entry should be minimized in an efficient market, all capacity sold in PJM's capacity market needs to be deliverable to load. Exelon explains that PJM applies this same deliverability standard to internal resources at the time of interconnection and PJM does not control the interconnection study process for external resources.²⁶ Exelon states that PJM's proposal builds on the external resource reforms accepted as part of the 2015 Capacity Performance proposal, where the Commission found that it was "necessary to ensure that external capacity resources are accountable for their individual performance when PJM's system is experiencing Emergency Actions."²⁷

25. PJM believes that pseudo-ties provide the best method of incorporating external resources into the PJM capacity market. PJM argues that this requires direct visibility and controllability of the external resource by the attaining Balancing Authority in order to meet the unit-specific standard of a capacity commitment in PJM. PJM argues that the proposed rule changes also help put external resources on more comparable footing with internal resources.²⁸ PJM argues that no generator has an entitlement to qualify as a Generation Capacity Resource.²⁹ PJM states that its proposal provides reasonable solutions to challenges that can arise when loads in one Balancing Authority Area rely on

²⁴ MISO IMM Protest at 7-8.

²⁵ *Id.* at 11. The MISO IMM filed a complaint against PJM on April 6, 2017. *See Potomac Economics v. PJM Interconnection, LLC*, Docket No. EL17-62-000.

²⁶ Exelon First Answer at 2-3.

²⁷ *Id.* at 3 (citing Capacity Performance Order, 151 ERC ¶ 61,208 at P 96).

²⁸ PJM First Answer at 7.

²⁹ *Id.* at 20.

generation physically located in other Balancing Authority Areas that have different planning, operating, and market rules and practices.³⁰

26. AEE argues that PJM's proposal would impose significant new requirements on external generators wishing to compete in PJM's capacity market and will likely require significant and costly transmission upgrades in neighboring regions that would be incurred by external generators.³¹

d. Commission Determination

27. We reject protestors' arguments on this issue. We find PJM has sufficiently shown that, under its current capacity construct, these rules are needed to help ensure that external resources are treated comparably to internal resources.³² PJM has shown that external resources have operational and deliverability concerns that differ from internal resources. Based on the record, we find that it is reasonable to detail the requirements for external resources that seek to pseudo-tie into PJM and to hold those resources which have become pseudo-tied to PJM to equivalent standards as internal resources in PJM. Because the pseudo-tie requirements address the operational and deliverability concerns of external resources, they also do not create unreasonable barriers to entry.³³

³⁰ *Id.* at 9.

³¹ AEE Protest at 3.

³² We recognize that a complaint has been filed challenging the overall structure of PJM's external resource construct. Those issues will be addressed in the complaint proceeding. *See Potomac Economics v. PJM Interconnection, LLC*, Docket No. EL17-62-000. The MISO IMM argues that PJM's pseudo-tie requirement for external resources that wish to participate in the PJM capacity auctions is unjust and unreasonable.

³³ For example, Brookfield compared PJM's proposal with tariff changes proposed in unrelated proceedings that the Commission found to be unreasonable due to increasing financial burdens on external generators and potentially raising barriers to entry. *See, e.g., Brookfield First Protest* at 19-20. As discussed above, we disagree and note that the circumstances raised in those unrelated proceedings are distinguishable from PJM's instant proposal. Unlike the examples cited by Brookfield (*e.g., Southwest Power Pool, Inc.*, 121 FERC ¶ 61,029) PJM's proposal seeks to place external and internal generators on comparable footing and does not place an inequitable financial burden on external generators. In addition, as noted in PJM's Deficiency Response at 2-5, PJM's pseudo-tie proposal is the product of PJM working with stakeholders and neighboring Balancing Authorities to define the requirements for pseudo-ties to facilitate the transfer of capacity

28. We find that external resources should serve as comparable substitutes for internal resources and to achieve this, PJM's pseudo-tie requirements account for the deliverability of an external resource to PJM load.

29. We note that under PJM's existing market rules, external resources are required to meet the criteria for obtaining an exception to the Capacity Import Limit as contained in section 1.7A of the RAA.³⁴ We find that the additional proposed pseudo-tie requirements would apply equally to all external resources that wish to pseudo-tie into PJM and that the requirements are transparent and codified within PJM's Tariff and RAA, with a few exceptions noted throughout this order. We therefore reject arguments that PJM's proposal is unduly discriminatory or creates unreasonable barriers to entry.

2. Interregional Coordination

a. PJM's Filing

30. PJM's proposal to enhance pseudo-tie requirements for external resources calls for coordination with other Balancing Authorities when conducting studies that require additional data or understanding a potential impact of a pseudo-tie on the different neighboring regions.

b. Comments and Protests

31. NYISO argues that PJM's proposed new pseudo-tie rules do not minimize seams at the NYISO/PJM interface by design, and do not account for commercial or reliability issues in NYISO. NYISO argues that they do not reflect the level of interregional

across seams. Again, unlike the examples cited by Brookfield, PJM's proposal is intended to better define the requirements for becoming a pseudo-tied resource to promote a level playing field between external and internal resources.

³⁴ The criteria for an exception are that the external resource: (i) has met all applicable requirements to be treated as equivalent to PJM region internal generation that is not subject to North American Electric Reliability Corporation (NERC) tagging as an interchange transaction (i.e., pseudo-tie); (ii) has long-term firm transmission service confirmed on the complete transmission path from the resource into PJM; and (iii) will be subject to the same obligations imposed on Generation Capacity Resources located in the PJM region by section 6.6 of Attachment DD of the Tariff, including the capacity market must-offer requirement. RAA at Article 1 – Definitions, 1.7A.

coordination that PJM has argued is necessary in the MISO *pro forma* proceeding.³⁵ NYISO argues that PJM's proposal omits necessary details that are fundamental to evaluation of its justness and reasonableness, of which the most serious omission is the absence of the *pro forma* pseudo-tie agreement that PJM has been drafting with its stakeholders. While this *pro forma* agreement is not mentioned in the instant filing, NYISO argues that it is clear that this *pro forma* agreement will impose numerous, substantive pseudo-tie implementation requirements that are not addressed in the instant filing.³⁶ Since key requirements governing the use and implementation of pseudo-ties relevant to NERC standards are not before the Commission, NYISO postulates that the Commission must reject PJM's proposal for omitting critically important terms and conditions and for having submitted the instant filing prematurely.³⁷

32. NYISO also argues that the PJM proposal fails to address whether a pseudo-tied generator, when it's not needed by PJM, may be used for reliability purposes by its native Balancing Authority. NYISO argues this situation might be construed as signifying that NYISO cannot schedule or dispatch a pseudo-tied resource to protect the reliability in the NYCA.³⁸ NYISO raises concerns about PJM's ability to commit and dispatch generators directly interconnected to the NYCA and argues that without the entire NYCA in its network model, PJM will not have full visibility into the possible reliability impacts of dispatching a pseudo-tied generator. NYISO argues that allowing PJM to control generators in the NYCA may introduce reliability issues when a pseudo-tied generator is needed to respond to local system issues, especially during emergencies or other system contingencies.³⁹

³⁵ NYISO Protest at 9, referencing MISO's filing in Docket No. ER17-1061 (MISO *pro forma* proceeding).

³⁶ *Id.* at 10.

³⁷ *Id.* at 11-13, citing, *e.g.*, *Northern Maine Independent Service Administrator, Inc.*, 119 FERC ¶ 61,231, at P 17 (2007) ("NMISA has not provided the Commission with sufficient information to determine the effects of its proposed revisions. We find, therefore, that NMISA has failed to demonstrate that the proposed tariff revisions are just and reasonable, and, accordingly, has failed to satisfy its burden of proof under section 205 of the FPA. Consequently, we reject NMISA's proposed revisions without prejudice.").

³⁸ *Id.* at 13-14.

³⁹ *Id.* at 14-17.

33. NYISO states that PJM's proposed tariff revisions are incomplete, and may be unjust and unreasonable, because they do not address how pseudo-tied Generation Capacity Resources will impact Total Transfer Capability and Available Transfer Capability determinations at PJM's borders with the Balancing Authority Area to which a pseudo-tied Generation Capacity Resource is directly interconnected.⁴⁰ Further, NYISO argues that it is unclear how PJM's proposal would impact NYISO's ability to schedule economic interchange as counter-flow when a pseudo-tied Generation Capacity Resource is providing its energy to PJM.⁴¹

34. NYISO states that the Commission should instruct PJM to revise its tariffs to clearly address the treatment of preference power exports and any other grandfathered arrangements (such as the Niagara and St. Lawrence Power Projects) that it may intend to support without requiring a pseudo-tie arrangement. NYISO argues that PJM's failure to identify such exceptions is inconsistent with the filing requirements of section 205 of the FPA.⁴²

c. Answers

35. NYTOs filed an answer in support of the NYISO protest. NYTOs argue that they are concerned PJM may exercise dispatch authority over generation assets in the NYCA that would threaten the ability of NYISO to maintain the reliability of its system and the ability of the NYTOs to maintain the reliability of their local transmission systems. NYTOs explain that each of the NYTOs has local reliability rules that they must enforce in coordination with NYISO, and that they are concerned with the ability of PJM to coordinate and ensure compliance with these reliability rules.⁴³ NYTOs echo concerns raised by NYISO regarding the missing *pro forma* agreement that PJM did not submit at the time of the instant filing.⁴⁴

36. NYTOs support NYISO's comments and state that if the Commission accepts PJM's filing, it should direct PJM to modify its tariff to clarify that the treatment of longstanding exports of capacity and energy from NYPA's Niagara and St. Lawrence

⁴⁰ *Id.* at 17-18.

⁴¹ *Id.* at 18.

⁴² *Id.* at 21.

⁴³ NYTOs Answer at 3.

⁴⁴ *Id.* at 4.

Power Projects into PJM will not be subject to either the pseudo-tie requirements or to the Capacity Import Limit set forth in Article 1 of the PJM RAA.⁴⁵

37. IPPNY also supports NYISO's comments and argues that PJM's requirements are not compatible with the PJM-NYISO JOA and not workable for the NYCA, where generators are located and when NYISO is reliant upon those generators' capacity to satisfy its capacity obligations. IPPNY argues that the Commission should reject PJM's proposal as it applies to NYISO as unjust and unreasonable.⁴⁶ IPPNY supports NYISO's willingness to work with PJM to develop a method of selling capacity across the PJM/NYISO border and requests the Commission to direct PJM to work with NYISO on such a mutually accepted method.⁴⁷

38. PJM states that NYISO's concerns are more appropriate for resolution through mutually negotiated changes to the Joint Operating Agreement (JOA) Among and Between New York Independent System Operator, Inc. and PJM Interconnection, L.L.C. (NYISO-PJM JOA), which PJM explains is not the subject of revisions proposed in this filing. PJM argues that NYISO has mischaracterized the proposal as an attempt to demand system changes within other RTOs and ISOs. PJM explains that, to the contrary, PJM only seeks to ensure equivalent treatment of both internal and external resources that participate in the PJM capacity market by clearly identifying rules for capacity used in PJM, not capacity used in external Balancing Authorities.⁴⁸ PJM argues that the facts that NYISO does not have any pseudo-tie rules for its own generators, and that there are no generators in New York that have pseudo-tied out of NYISO do not change the Commission's prior acceptance of pseudo-tie rules. PJM explains that its proposed rules would not impose any changes on external Balancing Authorities or external RTOs/ISOs.⁴⁹

39. PJM explains that its proposal does not require NYISO to perform a deliverability evaluation that meets PJM's criteria and that needs to be accepted by PJM, but would

⁴⁵ *Id.* at 4-5, n. 20 ("NYPA has been advised by PJM personnel that PJM agrees [that NYPA's export transactions into PJM] should remain "grandfathered" in accordance with longstanding precedent, so NYPA does not anticipate any opposition from PJM to this request.").

⁴⁶ IPPNY Answer at 4-6.

⁴⁷ *Id.* at 7-8.

⁴⁸ PJM First Answer at 46.

⁴⁹ *Id.* at 47.

require an external generator to secure a study as a condition of being allowed to offer into the PJM capacity auction. PJM clarifies that failure to do so would not allow a generator to offer into the PJM capacity auction, and that PJM would not force or ask NYISO to perform the study. Similarly, PJM states that it has not demanded that NYISO maintain network models that produce results for such flowgates that are within two percent of one another; that requirement would only apply to coordinating entities with which PJM has an agreed Congestion Management Process, such as MISO.⁵⁰

40. PJM states that its proposed rules would recognize the impacts of external generators (through modeling of the external system) and would provide safeguards against reliability issues in PJM and in the native Balancing Authority. PJM states that Total Transfer Capability and Available Transfer Capability at its borders will not change and will remain the foundation for requiring firm transmission service or in NYISO's case, the equivalent service to even allow for a pseudo-tie. PJM asserts that if a NYCA generator is critical to protecting NYISO's transmission system during electrical emergencies, that generator will not pass PJM's study requirements and thus, will not be allowed to offer into the PJM capacity auction until transmission system upgrades are made to resolve NYISO's critical reliance on it.⁵¹

41. PJM states that although there are currently no pseudo-ties between PJM and NYISO, it had several conversations about the proposed pseudo-tie rules with NYISO and will continue discussion with NYISO in an attempt to address any reliability and tariff concerns. With respect to grandfathered arrangements between Niagara and St. Lawrence Hydroelectric, PJM states that because these arrangements are not subject to the proposed requirements for external generators, they will be unaffected.⁵²

42. The PJM IMM filed an answer arguing that NYISO's Protest was a collateral attack on the Commission-approved pseudo-tie requirement. The PJM IMM notes that nothing within the instant filing made by PJM addresses or requires any change or accommodation by NYISO.⁵³

⁵⁰ *Id.* at 48.

⁵¹ *Id.* at 50-51.

⁵² PJM Deficiency Response at 5, n. 9 (citing PJM First Answer at 47). PJM further states that it does not consider these grandfathered arrangements to be pseudo-ties in the way pseudo-ties are defined under its Tariff.

⁵³ PJM IMM Answer at 1-3.

d. Commission Determination

43. We find that PJM's proposal, which is primarily aimed at establishing the requirements for external resources that seek to pseudo-tie into the PJM region, only involves minimal coordination between external Balancing Authorities. We therefore reject the arguments that PJM is required to do more interregional coordination when evaluating whether or not an external resource poses an operational or deliverability issue to the PJM region.

44. We disagree with the concerns raised by NYISO and NYTOs. First, the concerns raised assume that if resources located in NYISO seek to pseudo-tie into PJM, then they would have to solely abide by PJM's rules or the rules proposed by PJM and MISO in their *pro forma* agreements or their proposed revisions to the PJM-MISO JOA.⁵⁴ As PJM clarifies, there are no pseudo-ties from NYISO into PJM and nothing in PJM's proposal seeks to change NYISO's tariff or dictate what NYISO needs to approve if a future pseudo-tie resource should materialize.⁵⁵ If in the future, an external generator seeks to pseudo-tie from NYISO into PJM, we expect that the two regions could develop a mutual agreement for the NYISO-PJM JOA, similar to what MISO and PJM have done, and file it with the Commission.⁵⁶

45. In any event, as discussed above, we find PJM has satisfied its burden of justifying these revisions to ensure that the pseudo-tied resource is as available to it as an internal resource. Indeed, while PJM is requiring minimal coordination with external Balancing Authorities, the external Balancing Authority need not approve the pseudo-tie if its concerns are not addressed, such as the local reliability concerns mentioned by NYISO and NYTOs. The instant filing delineates the PJM rules for external resources that seek to pseudo-tie from an external Balancing Area into PJM and would not impose any restrictions on NYISO, nor would NYISO be required to approve of a pseudo-tie if it believed it would cause local reliability concerns in the NYCA.

⁵⁴ See, e.g., Docket Nos. ER17-1061 and ER17-2291.

⁵⁵ According to the NYTOs, PJM has acknowledged that NYPA's export transactions into PJM are grandfathered. NYTOs Answer at 4-5, n.20.

⁵⁶ We note that PJM and MISO have filed revisions to the PJM-MISO JOA to address the administration and coordination of pseudo-ties between PJM and MISO in Docket Nos. ER17-2218 and ER17-2220, respectively.

46. Since the time of the instant filing, PJM has filed, separately, revisions to its Tariff to incorporate its proposed *pro forma* pseudo-tie agreement.⁵⁷

47. NYISO and NYTOs maintain that the Commission does not have sufficient information to accept this filing given the other pseudo-tie proceedings before it. The issues raised in this instant filing are separate issues from those proceedings, as this filing addresses the underlying engineering and general eligibility requirements to assess an external capacity resource's reliable deliverability into PJM and ensure equitable treatment with internal capacity resources pursuant to PJM's Capacity Performance construct. PJM has provided sufficient information to justify its proposal in this proceeding.⁵⁸

3. Electrical Distance Requirement

a. PJM's Filing

48. PJM proposes that each external resource that seeks to pseudo-tie into the PJM region must meet the Electrical Distance requirement. PJM defines Electrical Distance as follows: "for a Generation Capacity Resource geographically located outside the metered boundaries of the PJM Region, the measure of distance, based on impedance and in accordance with the PJM Manuals, from the Generation Capacity Resource to the PJM Region."⁵⁹ Under the Electrical Distance requirement, an external resource may establish a pseudo-tie if it: (1) has a minimum Electrical Distance impedance equal to or less than 0.065; or (2) is within one station of a transmission bus that has a minimum Electrical Distance impedance equal to or less than 0.065. PJM explains that this requirement helps resolve the modeling challenges for resources located far beyond the PJM border.⁶⁰

b. Comments and Protests

49. AMP, NCEMC, IMEA, and Brookfield all protest the Electrical Distance requirement. AMP and NCEMC argue that PJM's Electrical Distance requirement is

⁵⁷ See Docket No. ER17-2291.

⁵⁸ Issues related to the proposed *pro forma* pseudo-tie agreement and proposed revisions to the MISO-PJM JOA will be addressed in those proceedings.

⁵⁹ See PJM Tariff, Definitions – E - F.

⁶⁰ PJM Transmittal at 14.

arbitrary and unsupported.⁶¹ AMP states that line impedances do increase in proportion to distance, but other factors weigh heavily as well, such as the size and type of the conductor where large conductors and more efficient conductors have lower impedances. AMP states that line loadings and operating temperatures affect impedance to some degree and in most cases, power flows from the external resource to PJM will involve more than one line.⁶² AMP and NCEMC also argue that PJM has not provided evidence that external resources with impedances that exceed the proposed limits will actually present any risk of model failure or performance problems.⁶³ Similarly, Brookfield argues that PJM has not demonstrated that the specific impedance values are based on any reliability-based criteria.⁶⁴

50. While the PJM IMM also argues that PJM did not provide adequate support for the proposed 0.065 per-unit impedance threshold, it argues that the threshold is not adequate because external resources should be full substitutes for internal resources and states it does not support using electrical distance impedance as a key criteria for the evaluation of an external resource.⁶⁵

51. IMEA opposes the Electrical Distance requirement. IMEA argues that impedance distance has nothing to do with deliverability, but rather the number of flowgates that PJM would have to model. IMEA argues PJM should be required to do the work caused by its action and not shift the burdens associated with its decisions onto the customers.⁶⁶ IMEA notes that PJM has not cited a single incident involving distant pseudo-tied generation.⁶⁷

52. NCEMC argues that if the Commission chooses to accept some form of Electrical Distance impedance test, it should require PJM to put the values and details of the test in the Tariff. NCEMC notes that PJM's proposed definition for Electrical Distance appears

⁶¹ AMP First Protest at 7; NCEMC First Protest at 13-14; NCEMC Second Protest at 8-12.

⁶² AMP First Protest at 6-7.

⁶³ *Id.* at 7; NCEMC Second Protest at 11-12.

⁶⁴ Brookfield First Protest at 20-21.

⁶⁵ PJM IMM Comments at 4-5.

⁶⁶ IMEA First Protest at 23.

⁶⁷ *Id.*

within the Tariff, but the requirements only refer to the PJM Manuals. NCEMC states that, consistent with long-held Commission precedent, the details of proposed rules “that could significantly affect the terms and conditions of service” must be filed under section 205 of the FPA.⁶⁸ IMEA shares NCEMC’s concern, noting that its external resources pass the current test, but if the test changes, it should only occur after a section 205 filing is made with the Commission where IMEA has the right to protest.⁶⁹

c. Answers

53. PJM explains that if a resource meets the Electrical Distance requirement, the resource and the surrounding area impacted by the injections from that resource can be included in PJM’s EMS without raising undue risk as a result of model inaccuracies or loss of data sources. PJM claims that the electrical distance of 0.065 per-unit impedance allows for extensive parts of the Eastern and Midwestern United States to be pseudo-tied, assuming compliance with the other requirements.⁷⁰ PJM states that the 0.065 threshold encompasses at least 130 GW of existing external generation resources.⁷¹

54. PJM explains that, contrary to protests, the Electrical Distance threshold is an analytical measurement used as a bright-line screen to communicate the amount of operational and compliance risk that PJM is willing to take on when expanding its State Estimator model to incorporate pseudo-ties.⁷² PJM explains that it receives telemetry data from transmission owners, generation owners, and other market participants and that those inherent redundancies in the telemetry data are not typically available to PJM from outside of the PJM region. PJM explains that data for external transmission facilities are typically provided to PJM by adjacent transmission providers, including ISOs and RTOs, and might be aggregated, causing a single point of failure for the PJM State Estimator as

⁶⁸ NCEMC First Protest at 16, citing *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, FERC Stats. & Regs. ¶ 31,241, at PP 1640-50, *order on reh’g*, Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 (2007), *order on reh’g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh’g*, Order No. 890-C, 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

⁶⁹ IMEA First Protest at 23.

⁷⁰ PJM First Answer at 7-8.

⁷¹ PJM Deficiency Response at 10.

⁷² PJM First Answer at 9-10.

PJM increases its reliance on the external data feeds.⁷³ PJM also explains that the further the State Estimator model extends beyond its own borders, the less resilient the PJM system becomes to data loss and inaccuracy of data and models. PJM points out that faulty external area data can cause PJM's State Estimator to fail to obtain a solution at all, meaning that PJM loses visibility of its own system until the estimator obtains a new solution.⁷⁴ PJM explains that a higher impedance threshold would impair the reliability of the EMS model by requiring an extensive expansion of the external network model, which adds to the risk of State Estimator solution failure.⁷⁵

55. PJM states that, in developing this threshold, it performed Distribution Factor Analysis (DFAX) analyses to identify the external facilities that would be impacted by PJM's dispatch of the external generation resources. The analysis identified the magnitude and complexity of reliably coordinating electrically distant external generation resources. For example, in attempting to pseudo-tie the Tatanka units, the initial DFAX analysis identified over 700 buses that could be impacted by dispatching transfers to PJM. PJM explains that more than 60 percent of the buses are in transmission zones two or more transmission zones away from PJM and that the actual modeled bus count would increase further from the initial DFAX analysis to accurately model the affected facilities. PJM explains that pseudo-tying the Tatanka units would have required a complete model for the 14,000 buses potentially affected, and by comparison, PJM explains that its model currently contains approximately 16,000 buses.⁷⁶

56. PJM clarifies that the calculation of the 0.065 threshold is an equivalent per-unit impedance of parallel paths between the facility and the PJM border.⁷⁷ PJM states that it would only consider changing the threshold if (1) expanding the PJM external model suggests it can be further expanded with minimal additional risk or (2) more standardized real-time nodal model exchanges, such as hierarchical State Estimation, become commercially available to ensure resilience of large external models.⁷⁸

⁷³ *Id.* at 10-11.

⁷⁴ *Id.* at 11.

⁷⁵ PJM Deficiency Response at 10.

⁷⁶ *Id.* at 9.

⁷⁷ *Id.* at 11.

⁷⁸ *Id.* at 12.

57. IMEA, NCEMC, Brookfield, and AMP all renewed their earlier protests in response to PJM's Deficiency Response.⁷⁹ Brookfield argues that PJM makes it clear that this threshold value will be a moving target, potentially leading to unjust and unreasonable results.⁸⁰ Brookfield argues that PJM ignores the fact that an External Resource could meet the Electrical Distance threshold, invest millions of dollars to fund transmission upgrades to satisfy PJM's deliverability standard, only to have PJM later change the threshold and bar the resource from the PJM markets. Brookfield argues that there would be little that an external resource could do to become compliant with this requirement short of building HVDC transmission lines to PJM.⁸¹

58. AMP argues that PJM's Electrical Distance requirement represents an attempt to impose a contract path approach to modeling the use of external resources, even though PJM and MISO use financial rights, rather than physical rights, for other purposes.⁸² AMP also argues that PJM merely states that this Electrical Distance is appropriate because of modeling needs, without offering any further explanation. AMP explains that PJM and MISO agreed, as per the Pseudo-tie Operating Guide, that in the cases of MISO resources pseudo-tying into PJM, MISO will be the native Reliability Coordinator and the local transmission operator in that MISO retains the TOP role.⁸³ AMP claims that PJM appears to have no responsibility for reliability of MISO's transmission system and PJM's need to model external transmission systems appears to be grossly overstated.⁸⁴

59. In terms of the modeling, AMP argues that PJM provides no additional information regarding how it selects particular parallel paths to include in its per unit impedance calculations.⁸⁵ AMP also argues that PJM does not provide justification on why 0.065 is the correct number as opposed to any other number, nor does PJM explain how or why the correlation between this number and the break between feasible and infeasible pseudo-ties can be expected to apply in all scenarios. AMP argues that PJM

⁷⁹ IMEA Second Protest at 20-22; NCEMC Second Protest at 8-13; Brookfield Second Protest at 17-18; AMP Third Protest at 6-10.

⁸⁰ Brookfield Second Protest at 17.

⁸¹ *Id.* at 18.

⁸² AMP Third Protest at 6.

⁸³ *Id.* at 7, citing Pseudo-Tie Operating Guide, § 3.1.1.

⁸⁴ *Id.* at 8.

⁸⁵ *Id.*

chose this number because it would limit the number of external resources eligible to participate in PJM's capacity auctions to a level satisfactory to PJM.⁸⁶

d. Commission Determination

60. We find that the Electrical Distance requirement is just and reasonable because it strikes an appropriate balance between allowing external resources to participate in PJM's capacity auctions, while providing PJM with a level of reliability assurance. As noted by PJM, the Electrical Distance requirement establishes a bright-line test, with clear values for determining eligibility of pseudo-ties from Balancing Authority Areas outside of PJM.

61. Several parties protest PJM's proposed Electrical Distance requirement of 0.065 per-unit impedance, arguing that the values, modeling, and explanations are absent from PJM's filing and answers. We disagree on several grounds. First, as PJM explains, the electrical distance is an analytical measurement that communicates the amount of operational and compliance risk that PJM is willing to take on when expanding its State Estimator to incorporate pseudo-tied resources. A higher impedance value increases the risk to PJM's State Estimator. Second, we note that PJM's proposed Electrical Distance requirement was the result of significant analysis. For example, PJM utilized its DFAX to identify the impact of a proposed external generating resource. PJM applied the DFAX analysis to a recent pseudo-tied resource and identified over 700 buses—with over 60 percent of those buses two or more zones away from PJM—that would be affected by the proposed pseudo-tied resource. Using this analysis, PJM developed an Electrical Distance threshold that would include facilities that were previously identified as feasible and in a manner that mitigates the risk associated with expanding the State Estimator. We reject arguments that PJM should have explained why other impedance values are infeasible, as applicants under FPA section 205 bear no such burden.

62. NCEMC and IMEA raise a related issue regarding whether the values pertaining to the impedance threshold and the models PJM will use to determine it should be included in the Tariff. NCEMC and IMEA argue that these values should be added to the Tariff, as they significantly affect the terms and conditions of service. We agree. While the methodology that PJM will utilize to conduct the Electrical Distance requirement can remain in the PJM Manuals, we agree with NCEMC and IMEA that the impedance values, as well as the unit of measurement of the impedance values, must be included in the PJM Tariff. Since, under PJM's proposal, electrical distance is one of the primary determinants to establish external resource eligibility to be able to pseudo-tie into PJM, we find that this value explicitly affects the terms and conditions of pseudo-ties and must

⁸⁶ *Id.* at 9.

be included in the PJM Tariff and any revisions must be filed with the Commission under section 205 of the FPA. Therefore, we accept, subject to condition, PJM's proposed Electrical Distance requirement. PJM must revise its Tariff, at section 5.5A(b)(i)(A), as follows: ~~meets the Electrical Distance requirements established in the PJM Manuals for Pseudo-Ties~~ "An external Generation Capacity Resource that seeks to pseudo-tie must have a minimum Electrical Distance impedance equal to or less than 0.065 p.u.; or is within one station of a transmission bus that has a minimum Electrical Distance impedance equal to or less than 0.065 p.u." PJM must make this revision within 30 days of the date of this order.

4. Market-to-Market Flowgate Test

a. PJM's Filing

63. As part of the requirements for new external resources, PJM proposes a market-to-market flowgate test to establish limits on the number of coordinated flowgates PJM must add in order to accommodate a new pseudo-tie. Under this test, an external resource would be eligible to pseudo-tie to PJM if at least one PJM internal generation resource has a minimum 1.5 percent flow impact on all new flowgates it would need to coordinate as a result of the pseudo-tie.⁸⁷ PJM explains that the purpose of this eligibility test is to prevent adding new coordinated flowgates unless PJM has adequate options to manage congestion on that flowgate in addition to reducing the output of the pseudo-tied resource itself.⁸⁸ PJM states that the internal resource must have a usable dispatch range, as identified by an historic economic minimum offer lower than its historic economic maximum offer. PJM explains that if the proposed pseudo-tie would require PJM to add a new coordinated flowgate that does not meet these conditions, the external resource would not be qualified.⁸⁹

⁸⁷ PJM Transmittal at 14. PJM explains that it was required to coordinate with MISO on an additional 114 flowgates as a result of taking on only seven pseudo-ties in MISO during the 2016/2017 Delivery Year.

⁸⁸ *Id.* at 14-15.

⁸⁹ *Id.* PJM states that the minimum flow impact threshold corresponds to the 1.5 percent minimum flow impact threshold that PJM currently uses to identify resources that may be dispatched to help alleviate congestion on coordinated flowgates.

b. Comments and Protests

64. Several parties argue that the market-to-market flowgate test is unjust, unreasonable, discriminatory, and anticompetitive.⁹⁰ AMP argues that PJM is trying to avoid incremental uplift from having to redispatch the external resource by imposing a test that is illogical and anticompetitive. AMP, NCEMC and IMEA state that the proposed market-to-market flowgate test will create a barrier to entry for any generator that cannot pass this test.⁹¹ NCEMC claims that the implication of this proposed requirement is that a pseudo-tie resource must be deliverable 100 percent of the time is not equitably imposed on internal generators.⁹²

65. Several parties claim that PJM does not sufficiently justify the 1.5 percent minimum flowgate impact threshold,⁹³ and that PJM lacks the ability to make such a determination. The MISO IMM and NCEMC argue that whether a PJM internal generator has a 1.5 percent or greater impact on a flowgate bears no relationship to whether the unit is deliverable or to the reliability implications of accepting the capacity import from that resource.⁹⁴ The MISO IMM also contends that PJM will not have the necessary information to predict whether a new market-to-market constraint will be created by a new pseudo-tie, and the extent of any flow effects of other PJM units on that particular constraint.⁹⁵ NCEMC and AMP argue that PJM does not explain why re-dispatching a pseudo-tied resource cannot alone resolve a constraint on a particular flowgate.⁹⁶ AMP adds that PJM fails to explain how it would experience “costs from

⁹⁰ MISO IMM Protest at 7-8; NCEMC Second Protest at 13-14; IMEA First Protest at 24-29; IMEA Second Protest at 22-27; Brookfield First Protest at 20; Brookfield Second Protest at 17.

⁹¹ IMEA First Protest at 24; IMEA Second Protest at 23; AMP First Protest at 10; AMP Third Protest at 10.

⁹² NCEMC Second Protest at 14.

⁹³ Brookfield First Protest at 20; Brookfield Second Protest at 17; IMEA First Protest at 6; IMEA Second Protest at 24-25; AMP First Protest at 8-10.

⁹⁴ MISO IMM Protest at 7-8; NCEMC First Protest at 11; NCEMC Second Protest at 14-15.

⁹⁵ MISO IMM Protest at 8.

⁹⁶ NCEMC Second Protest at 14; AMP First Protest at 8.

excessive congestion on MISO facilities”⁹⁷ and does not describe the consequences of selecting a level below the 1.5 percent minimum flow impact threshold.⁹⁸

66. Other parties contend that the market-to-market flowgate test lacks transparency and places undue burden on external resources seeking to pseudo-tie to PJM. IMEA notes a lack of transparency regarding the information needed to determine whether a generator passes this test.⁹⁹ IMEA explains that in order to plan for this requirement, a generator needs to know: (1) the list of flowgates caused by an existing pseudo tie or that would be caused by a new pseudo-tie; (2) the flow distribution impact of internal PJM generation resources on those flowgates; and (3) the historic minimum and maximum offers for each internal PJM generation resource, which is extremely market sensitive, and is unknown by other generators.¹⁰⁰ AMP states that PJM failed to explain how it would determine the existence of a sufficiently dispatchable generator.¹⁰¹ IMEA and AMP note that only PJM and the native Balancing Authority have access to this information and the minimum flow distribution impact level is not set forth in the PJM Tariff, but rather will be specified in the PJM Manuals.¹⁰² Similarly, Brookfield and IMEA emphasize that many of the facts that drive the flowgate test requirement are beyond the control of a generator and generators lack recourse to mitigate any issues PJM might say exist.¹⁰³ IMEA states the creation of new flowgates is governed exclusively by the congestion management processes between the Balancing Authorities under the JOAs, and an external resource seeking to pseudo-tie has no seat at the table.¹⁰⁴ Brookfield explains that, for example, a transmission topology change, after the resource

⁹⁷ AMP Third Protest at 10 (citing PJM Deficiency Response at 13).

⁹⁸ AMP First Protest at 9.

⁹⁹ IMEA First Protest at 25; IMEA Second Protest at 23.

¹⁰⁰ IMEA First Protest at 24-25; IMEA Second Protest at 23.

¹⁰¹ AMP First Protest at 9-10. AMP also suggests a typographical error in the definition of economic maximum because it repeats the definition of economic minimum.

¹⁰² IMEA First Protest at 28; IMEA Second Protest at 27.

¹⁰³ IMEA First Protest at 26; IMEA Second Protest at 24; Brookfield Second Protest at 18.

¹⁰⁴ IMEA First Protest at 25-26; IMEA Second Protest at 24.

previously met the standards and made corresponding investments, could result in a resource failing the flowgate test.¹⁰⁵

67. AWEA argues that PJM has not provided any evidence that one or two years of continued use of the current operating guides, instead of an immediate application of the market-to-market flowgate test, is not possible or would cause reliability problems.¹⁰⁶ As such, AWEA contends the Commission should reject or suspend the market-to-market flowgate test until it can be further evaluated and to permit external suppliers time to establish the required predicate to effective participation in the capacity auction.¹⁰⁷

68. IMEA contends that the market-to-market flowgate test does not relate to deliverability, but rather congestion management and the number of flowgates PJM has to model.¹⁰⁸ IMEA argues that, where the Commission has previously found that PJM should be responsible for “all implementation issues for a pseudo-tie resource”, PJM should not be allowed to shift burdens associated with its decisions onto its customers or external resources.¹⁰⁹

69. Brookfield states that the proposed market-to-market flowgate test would have an external party, PJM, applying control actions to manage a flowgate in a neighboring Balancing Authority Area, and that such overlapping controls could affect the reliability performance from the point of view of continuous load balancing by the Balancing Authority and the security aspect of reliability maintained by the transmission service provider.¹¹⁰ Brookfield also contends that, though PJM has emphasized its coordination with MISO in developing the flowgate test, it does not explain how its deliverability standard was addressed with or will be implemented by other neighboring Balancing Authorities and transmission providers.¹¹¹ Brookfield states that PJM has not demonstrated that the multiple-flowgate problem extends beyond the MISO/PJM seam,

¹⁰⁵ Brookfield Second Protest at 18.

¹⁰⁶ AWEA Protest at 5-6.

¹⁰⁷ *Id.* at 6.

¹⁰⁸ IMEA First Protest at 27; IMEA Second Protest at 25.

¹⁰⁹ IMEA First Protest at 27; IMEA Second Protest at 25 (citing Capacity Performance Order, 151 FERC ¶ 61,208 at PP 6-7 and n.18).

¹¹⁰ Brookfield First Protest at 21 (citing Austria Affidavit at P 30).

¹¹¹ Brookfield Second Protest at 16.

and argues that PJM has failed to support the broad remedy of the market-to-market flowgate test for the narrower problem identified in the filing.¹¹² As such, Brookfield contends that the Commission should reject the application of new rules on non-market areas to avoid implementing a solution designed to address MISO issues more broadly.¹¹³ NYISO argues that the Commission should not permit PJM to prescribe generally applicable, one-size-fits-all, pseudo tie obligations in its tariffs and force all neighboring Balancing Authorities to accommodate PJM's rules.¹¹⁴

c. Answers

70. PJM explains that if no generators meet this 1.5 percent flow impact threshold, PJM has no options for constraint relief which often results in discontinuation of coordination for that flowgate.¹¹⁵

71. PJM argues that Brookfield is incorrect in its assumption that this test would have an external party, such as PJM, applying control actions to manage a flowgate in a neighboring Balancing Authority.¹¹⁶ PJM explains that this test has no impact on the actual coordination of flowgates with an external Balancing Authority and that it will not change the MISO-PJM JOA Congestion Management Process that identifies a coordinated flowgate or any provisions on these flowgates.¹¹⁷ PJM explains that this test only affects whether PJM will permit an external generation resource to be pseudo-tied for the purpose of participating in PJM's capacity auctions. PJM states if the resource does pass the test, PJM will have dispatch control of the resource and will be responsible for that resource's flow impacts on external flowgates.¹¹⁸

¹¹² *Id.* at 22 (citing *Midwest Indep. Transmission Sys. Operator, Inc.*, 143 FERC ¶ 61,292, at P 23 (2013)).

¹¹³ *Id.* at 16.

¹¹⁴ NYISO Protest at 18-20.

¹¹⁵ PJM First Answer at 14-15. PJM also proposed that the internal resource must have a usable dispatch range, as identified by an historic economic minimum offer lower than its historic economic maximum offer.

¹¹⁶ *Id.* at 15.

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 15-16.

72. In response to AMP's protest that a pseudo-tie should not create any congestion beyond that which can be relieved by redispatching the pseudo-tied resource, PJM argues that this ignores the ramifications of creating a new external flowgate under a market-based congestion management process like that under the MISO-PJM JOA.¹¹⁹

Specifically, PJM explains that PJM and PJM loads, as the parties that bear congestion costs, are better served operationally and economically if there are options for relieving congestion beyond only redispatching the pseudo-tied resource.¹²⁰ PJM contends that its reliance on the existing minimum standard to identify market-to-market redispatch options provides sufficient technical basis for the 1.5 percent minimum impact threshold to identify PJM internal resources that would provide a redispatch option for a new market-to-market flowgate.¹²¹

73. PJM rebuts the MISO IMM's argument that PJM will not have information needed to predict whether a new market-to-market constraint will be created by a new pseudo-tie. PJM states that it already has a transmission model that represents the expected system for the effective date of the pseudo-tie along with both internal and pseudo-tied generation units.¹²² PJM explains that it can determine whether a pseudo-tie requires market-to-market coordination of a flowgate through a transfer analysis that measures a pseudo-tie's impact on all external transmission facilities.¹²³ PJM states it will each year post a list of external resources that pass the market-to-market flowgate test, and protestors concerns about being unable to obtain this information are unfounded.¹²⁴

74. PJM states that IMEA's objection that whether or not PJM can manage a new flowgate with an internal resource is beyond a resource's control does not make the test unreasonable and that no generator has an entitlement to qualify as a capacity resource in PJM.¹²⁵ PJM states it is reasonable to decline a pseudo-tie if permitting it would result in

¹¹⁹ *Id.* at 16.

¹²⁰ *Id.*

¹²¹ *Id.* at 17.

¹²² *Id.*

¹²³ *Id.* PJM notes that the transfer test is identical to the current flowgate qualifications test.

¹²⁴ *Id.*

¹²⁵ *Id.* at 17-18.

creating a new market-to-market flowgate with only a single redispatch option for managing congestion on that flowgate.¹²⁶

75. PJM clarifies that the 1.5 percent impact threshold is the one currently used by PJM and MISO in their JOA and that PJM is merely adopting a threshold that already exists as the minimum percentage impact an internal generation resource can have on a flowgate for it to be considered a redispatch option to help control flow on that particular flowgate.¹²⁷ PJM explains that the 1.5 percent impact threshold is a bright line test that helps to avoid costs from excess congestion on MISO facilities and was developed in coordination with MISO.¹²⁸

d. Commission Determination

76. We find PJM's market-to-market flowgate test to be just and reasonable and not unduly discriminatory or preferential. We find that PJM has established that the 1.5 percent level is appropriate as it will prevent PJM customers from facing undue excessive costs resulting from congestion on coordinated flowgates, whether those flowgates are coordinated with MISO or any other Balancing Authority. We find that the 1.5 percent impact threshold is not an undue barrier to entry, but rather an appropriate measure to provide PJM options to relieve or mitigate congestion at market-to-market flowgates between PJM and MISO, as well as other Balancing Authorities and non-market areas, beyond the sole recourse of redispatching a pseudo-tied resource, where the alternative is discontinuation of a coordinated flowgate. Further, we note that this is the same threshold that is currently applied under the PJM-MISO JOA as a means of reducing congestion along the MISO-PJM seam.¹²⁹

77. We also find that PJM has sufficiently explained its procedures relating to application of the market-to-market flowgate test and provides an appropriate level of transparency through its commitment to post each year a list of external resources that pass this test. We also conclude that PJM has adequately explained its ability to accurately identify instances where a new flowgate would not pass this test and, accordingly, will not shift an undue burden on external generators seeking to pseudo-tie to PJM, as the test does not require an external resource to perform any modeling on its

¹²⁶ *Id.* at 18.

¹²⁷ PJM Deficiency Response at 13-14, referencing the JOA, Attachment 3, section 1.1.4.

¹²⁸ *Id.*

¹²⁹ JOA, Attachment 3, section 1.1.4.

own. We find that PJM has clearly identified and explained the threshold by which it will determine whether an external resource passes this test. We agree with PJM that a lack of recourse for external generators that do not pass this test, or are subject to a change in transmission topology conditions beyond their control, does not render PJM's market-to-market flowgate test unjust or unreasonable.

78. We also agree with PJM that the flowgate test does not create overlapping operational control responsibilities between PJM and the external Balancing Authority; it is merely an eligibility test to determine whether or not a pseudo-tie will be permitted. The proposed market-to-market flowgate test is a mechanism to address the potential for increased congestion—and the accompanying potential to increase costs on PJM customers—created by a proposed pseudo-tie.

79. We agree with IMEA that the 1.5 percent minimum impact threshold should be included in PJM's Tariff as it explicitly affects the terms and conditions of service for pseudo-ties. As with the Electrical Distance test, the market-to-market flowgate test methodology can remain within the PJM Manuals, but the minimum impact threshold value must be included in the PJM Tariff since it is a primary determinant to establish external resource eligibility to be able to pseudo-tie into PJM. Any future revisions to this value must be filed with the Commission under section 205 of the FPA.¹³⁰ Therefore, we accept, subject to condition, PJM's proposed minimum impact threshold, and to ensure clarity, direct PJM to revise its Tariff, under section 5.5A(b)(i)(B), to contain the 1.5 percent minimum impact threshold proposed by PJM in this proceeding, and read as follows: "at least one generation resource that has a historic economic minimum offer lower than its historic economic maximum offer, located inside the metered boundaries of the PJM Region, has a minimum flow distribution impact ~~at the level specified in the PJM Manuals of 1.5 percent~~ on each eligible coordinated flowgate resulting from such Pseudo-Tie." PJM must make this revision within 30 days of the date of this order.

5. Model Consistency Requirement

a. PJM's Filing

80. As part of the new requirements for new external resources, PJM proposes a model consistency requirement. Under this requirement, an external resource is eligible to pseudo-tie to PJM, if PJM and the relevant coordinating entities' network models produce results that are within two percent of one another for any new coordinated

¹³⁰ 16 U.S.C. § 824d.

flowgate added to accommodate that pseudo-tie. PJM states that this requirement will help avoid modeling errors and promote consistency, certainty, and transparency.¹³¹

b. Comments and Protests

81. Several parties argue that PJM's proposed model consistency requirement is unjust and unreasonable and inappropriately shifts the burden to an external resource seeking to pseudo-tie¹³² or the external Balancing Authority.¹³³ IMEA and NCEMC contend the modeling consistency requirement will create a barrier to entry for any generator that cannot pass the two percent threshold test.¹³⁴ AMP argues that the proposal is unreasonable because it allows the RTOs to avoid the consequences of their own inaccuracies and denies the external resources the ability to participate in the PJM capacity auctions.¹³⁵ Brookfield, IMEA, Dynege and Tilton argue that this requirement creates a substantial level of uncertainty for an individual seller because such a seller has no control over the model used by its host Balancing Authority and no way of knowing whether its host Balancing Authority may implement modeling changes in the future that could result in a divergence of more than two percent with PJM's model.¹³⁶ Brookfield, NCEMC, IMEA, AMP, Dynege and Tilton assert that external resources should not be subject to disqualification for factors they cannot control.¹³⁷ IMEA contends there is not transparency to the information necessary for a generator to know whether it passes this test and what assumptions are used year to year because only PJM and the host Balancing Authority know the flow impacts and shift factors of the flowgates they model.¹³⁸

¹³¹ PJM Transmittal at 15.

¹³² AMP First Protest at 10; AWEA Protest at 6; Dynege and Tilton Protest at 9; Tilton Comments at 3; IMEA First Protest at 29-30; IMEA Second Protest at 28.

¹³³ NYISO Protest at 26.

¹³⁴ IMEA First Protest at 29; IMEA Second Protest at 28; NCEMC Second Protest at 15.

¹³⁵ AMP First Protest at 10.

¹³⁶ Dynege and Tilton Protest at 10; Tilton Comments at 3; IMEA First Protest at 29; IMEA Second Protest at 28; Brookfield Second Protest at 18.

¹³⁷ Tilton Comments at 3-4; Dynege and Tilton Protest at 9-10; AMP First Protest at 10; IMEA First Protest at 29; IMEA Second Protest at 28; NCEMC Second Protest at 15-16; Brookfield Second Protest at 18.

¹³⁸ IMEA First Protest at 29; IMEA Second Protest at 28.

NCEMC states that modeling disagreements between PJM and an external Balancing Authority could unduly result in significant delays in finalizing a pseudo-tie arrangement or denied eligibility and there is no way to know which specific neighboring Balancing Authorities' models other than MISO's will comply with this requirement.¹³⁹

82. Similarly, NYISO argues that PJM's modeling consistency requirement is problematic because it requires the external Balancing Authority to conform its network model to produce the same results as PJM's, without regard to quality of the output from PJM's network model.¹⁴⁰ NYISO contends it, not PJM, has the most experience modeling and up-to-date information for coordinated flowgates that represent NYISO constraints and it should be PJM's obligation to ensure network model consistency, not the other way around.¹⁴¹

83. AMP, IMEA and NCEMC assert that PJM has not justified why two percent would be the correct threshold needed to maintain network models or to deny a generator's request to pseudo-tie,¹⁴² or why a different variance threshold might not be appropriate for PJM's borders with neighboring Balancing Authorities other than MISO.¹⁴³ NYISO states that PJM fails to explain what the consequences would be if the results of the two network models deviated by more than two percent after PJM approves a Generation Capacity Resource. NYISO argues that PJM should be required to specify in its tariff that this requirement is only intended as an eligibility threshold that might prevent an external generator from becoming an External Capacity Resource.¹⁴⁴

c. Answers

84. PJM states that its modeling consistency requirement is reasonable as it ensures that coordinating entities are on the same page to enable the reliable deliverability of energy from a pseudo-tied resource to PJM load. PJM states that a generator's ability to

¹³⁹ NCEMC Second Protest at 15-17; AMP Third Protest at 11; IMEA Second Protest at 28-29.

¹⁴⁰ NYISO Protest at 26.

¹⁴¹ *Id.*

¹⁴² IMEA First Protest at 29-30; IMEA Second Protest at 28-29; NCEMC Second Protest at 16; AMP Third Protest at 11-12.

¹⁴³ NCEMC Second Protest at 16.

¹⁴⁴ NYISO Protest at 26-27.

be relied on as capacity could be diminished if the coordinating entities' views of the relevant flowgate diverge significantly due to modeling differences.¹⁴⁵ In response to concerns that the modeling consistency requirement burdens capacity market sellers with pseudo-tied resources, PJM states that those capacity market sellers do not coordinate flowgates or modify the model of the coordinating entities. Instead, PJM states that it is simply applying a quantitative standard for modeling consistency to ensure reliable delivery. PJM notes that MISO and PJM already apply this two percent standard as part of a process for existing pseudo-tied resources.¹⁴⁶

85. PJM explains that the process for application of the modeling consistency standard will be transparent and it will notify market participants of coordinating entities with which PJM has met the two percent objective.¹⁴⁷ Noting that there is zero percent modeling difference for internal resources that are all under PJM's model, PJM states that the two percent standard is reasonable because it recognizes that the use of different models by coordinating entities can result in some amount of model divergence.¹⁴⁸

86. PJM states that this benchmark was negotiated in order to align Generator Shift Factors and Generation to Load DFAX calculation between PJM and MISO to support the market-to-market process.¹⁴⁹ PJM further explains that the two percent standard recognizes that use of different models can result in some amount of difference, but that difference should be minimized as much as possible. PJM states that PJM and MISO already use this two percent standard as part of a process for existing pseudo-tied external generation resources.¹⁵⁰

d. Commission Determination

87. We find PJM's modeling consistency requirement is just and reasonable because it provides for comparable treatment of external capacity resources seeking to pseudo-tie to PJM and internal capacity resources under PJM's Capacity Performance construct. We are not persuaded by comments that the modeling consistency requirement places an

¹⁴⁵ PJM First Answer at 18.

¹⁴⁶ *Id.* at 19.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ PJM Deficiency Response at 14.

¹⁵⁰ *Id.* at 14-15.

undue burden on external resources seeking to pseudo-tie to PJM because the external resources are not required to do any of the modeling under this proposal. We agree with PJM that modeling variance can result in diminished ability to reliably deliver energy between markets, and that such variance should be minimized to the maximum extent practicable. To this end, we find that the two percent threshold strikes a reasonable balance in allowing for sufficient modeling variance between an external Balancing Authority and PJM.

88. We find that PJM's modeling consistency requirement provides a transparent, quantitative standard for network modeling consistency to help ensure reliable delivery. We note that PJM has committed to notifying market participants of coordinating entities with which PJM has met the two percent objective. Further, we note that external Balancing Authorities, such as NYISO, retain sufficient recourse to disallow generators within its Balancing Authority Area to participate in PJM markets as pseudo-ties.

6. Tagging Assurances and Firm Flow Entitlements

a. PJM's Filing

89. PJM proposes that an external resource seeking to pseudo-tie to PJM cannot be subject to NERC tagging and must obtain written acknowledgement of such from the external Balancing Authority. According to PJM, this requirement would enable capacity transfers into PJM without tagging and allow PJM to dispatch external resources similarly to internal resources.¹⁵¹ PJM states that the Commission has previously approved a requirement that all resources seeking to offer as Capacity Performance Resources in PJM be pseudo-tied into PJM thereby avoiding NERC tagging requirements and the potential for curtailment under TLR processes, as well as enabling unit-specific performance evaluations.¹⁵² PJM explains that pseudo-tied resources have presented congestion management complications which can manifest in designation and management of additional flowgates under a joint congestion management process, or

which can require arrangements to avoid resource-tagging in non-market areas as required by NERC standards.¹⁵³

¹⁵¹ PJM Transmittal at 15.

¹⁵² PJM Transmittal at 3 (citing Capacity Performance Order, 151 FERC ¶ 61,208 at PP 96-97, *order on reh'g*, 155 FERC ¶ 61,157 at P 44).

¹⁵³ *Id.* at 4.

90. PJM also proposes that firm allocations¹⁵⁴ associated with any coordinated flowgates applicable to an external resource seeking to pseudo-tie must be allocated by the external Balancing Authority to PJM. PJM states that a seller must commit in writing to take the necessary steps to implement these arrangements prior to the start of the relevant Delivery Year.¹⁵⁵ PJM explains that this requirement is necessary because PJM's Congestion Management Process agreements with external entities do not guarantee that flow entitlements be treated as firm.¹⁵⁶ Without the Firm Flow Entitlement, PJM must instead model a coordinated flowgate at a limit below the level necessary to commit a unit at its capacity obligation, which PJM argues undermines the purpose of procuring the external resource for capacity in PJM.¹⁵⁷ PJM states that treating a resource's access to PJM through a flowgate as non-firm could expose PJM to market-to-market payments and TLR curtailments when external bottlenecks are constrained.¹⁵⁸

b. Comments and Protests

91. Tatanka states that PJM's tagging requirement is unjust and unreasonable and should be rejected. Tatanka states that, in its filing, PJM identifies four areas of concern relating to its current use of pseudo ties: modeling, congestion management, planning, and operational challenges. Tatanka argues that these concerns originate largely from PJM's insistence that it model external transmission systems and only become issues because of PJM's previous insistence on a pseudo-tie requirement with no tagging, which PJM argues necessarily leads to a requirement that PJM extend its model over the entire

¹⁵⁴ See JOA Attachment 3, Appendix. A Firm Flow Entitlement is defined as follows: "The firm flow entitlement (FFE) represents the net allocation on M2M Flowgates used in the market-to-market settlement process. The FFE is determined by taking the forward allocation (using 0% allocations) and reducing it by the lesser of the two day-ahead allocation in the reverse direction (using 0% allocations) or the generation-to-load impacts in the reverse direction (down to 0%). The generation-to-load impacts in the reverse direction come from the day-ahead allocation run. The forward allocation comes from the day-ahead network and native load (DA NNL) calculation. The FFE may be positive, negative or zero."

¹⁵⁵ PJM Transmittal at 16.

¹⁵⁶ *Id.* at 9.

¹⁵⁷ *Id.*

¹⁵⁸ MISO IMM at 8; IMEA First Protest at 19-20; IMEA Second Protest at 17-19; Dynegy And Tilton Protest at 8-9; Tilton Comments at 3-4; NYISO Protest at 23-25.

external transmission system to the point of interconnection of the external generator.¹⁵⁹ Tatanka asserts that the existing Tariff and NERC requirements do not require PJM to extend its model as such, but instead only require neighboring Balancing Authorities to coordinate to ensure the exchange of relevant information about the pseudo-tie in a congestion management procedure if the pseudo-tie deliveries will not be tagged.¹⁶⁰ AWEA and AMP contend the tagging assurances requirement will create a barrier to entry that imposes burdens on other transmission providers that have not been justified or explained by PJM.¹⁶¹

92. NYISO contends that PJM's insistence on using non-tagged exchanges instead of using scheduled interchange to deliver energy from NYISO to PJM is inconsistent with market rules NYISO and PJM jointly developed for operating the New York and New Jersey phase angle regulators and could cause significant market inefficiencies and reliability concerns.¹⁶² NYISO states that TLR events are exceedingly rare¹⁶³ and unit-specific performance monitoring does not present significant concerns at the PJM-NYISO seam.¹⁶⁴ NYISO proposes that, as an alternative to the tagging assurance requirement, it is willing to work with PJM to determine how specific pseudo-tie resources performed.¹⁶⁵

93. Several protestors contend that PJM's requirement that an external resource seeking to pseudo-tie to PJM obtain Firm Flow Entitlements associated with any new coordinated market-to-market flowgates is unjust and unreasonable and is an insurmountable barrier to entry into PJM's capacity market.¹⁶⁶ The MISO IMM, IMEA,

¹⁵⁹ Tatanka Protest at 10.

¹⁶⁰ *Id.* at 12-13. Tatanka states that the relevant NERC requirement is more general than PJM represents and requires tagging "unless the information about the Pseudo-Tie is included in the congestion management procedure(s) via an alternate method." *See* NERC Standard INT-004-3.1.

¹⁶¹ AWEA Protest at 6; AMP First Protest at 6.

¹⁶² NYISO Protest at 31.

¹⁶³ *Id.* at 29 and n. 51. NYISO states it has identified only seven TLR 5s resulting in transaction curtailments at the NYCA/PJM border since January 1, 2013.

¹⁶⁴ *Id.* at 29-30.

¹⁶⁵ *Id.* at 30.

¹⁶⁶ MISO IMM Protest at 8.

and Dynegy and Tilton explain that new customers do not have the ability to procure Firm Flow Entitlements because Firm Flow Entitlement rights are assigned to the attaining Balancing Authority if the generation and transmission from the host Balancing Authority were in place and serving load in the attaining Balancing Authority on the freeze date agreed on by the parties to the JOA.¹⁶⁷ Dynegy and Tilton assert that based on PJM's agreement with MISO set forth in the JOA, "MISO effectively confiscates [Firm Flow Entitlements] historically associated with generation resources when they are pseudo-tied into PJM."¹⁶⁸ The MISO IMM explains that generally, the creation of new Firm Flow Entitlements are due to transmission upgrades that expand the capability of the transmission system.¹⁶⁹ The MISO IMM contends that there is no economic basis to transfer Firm Flow Entitlements, which belong to existing NYISO and MISO customers that have paid for the embedded costs of the transmission system, to PJM just because a supplier chose to export capacity.¹⁷⁰ The MISO IMM and IMEA assert that, in addition to preventing new resources from participating in PJM's capacity market, existing pseudo-ties will have to un-pseudo-tie after the grandfather period if they do not otherwise qualify for an exception under PJM's proposal.¹⁷¹ IMEA contends PJM has not provided justification for such an extreme restriction.¹⁷²

94. IMEA also argues that PJM misrepresents the firm flow allocation requirement and broader Congestion Management Process as being necessary based on system conditions and deliverability, when in fact the process is LMP-based in a market-to-market environment.¹⁷³ As such, IMEA argues that PJM's concerns about curtailment are unwarranted and as long as a pseudo-tied resource is willing to pay the prevailing LMP other generators will make corresponding adjustments to their output to relieve congestion.¹⁷⁴ IMEA asserts that PJM's forthcoming long-term solution to the Firm Flow

¹⁶⁷ IMEA First Protest at 21; MISO IMM Protest at 8; Dynegy and Tilton Protest at 7. IMEA notes that for PJM and MISO, the freeze date was set as May 1, 2004.

¹⁶⁸ MISO IMM Protest at 8.

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ *Id.*; IMEA First Protest at 20; IMEA Second Protest at 19.

¹⁷² IMEA First Protest at 21; IMEA Second Protest at 18-19.

¹⁷³ IMEA First Protest at 21; IMEA Second Protest at 18-19.

¹⁷⁴ IMEA First Protest at 21-22.

Entitlement freeze date initiative and associated assurances provide even more support for the argument that the proposed Firm Flow Entitlement requirement should be stricken.¹⁷⁵

95. Dynegy and Tilton add that Capacity Market Sellers have no ability to obtain written commitments to allocate Firm Flow Entitlements from their host Balancing Authority.¹⁷⁶ Tilton argues that external resources should not be subject to disqualification from pseudo-tying based on factors they cannot control, such as Firm Flow Entitlements. Tilton also argues that subjecting existing external resources to an open-ended risk of future disqualification that they have no ability to predict or manage is unjust and unreasonable.¹⁷⁷ AMP asserts that PJM does not provide a rationale for shifting seams coordination activities and undue burden, including obtaining written acknowledgement of tagging assurances and Firm Flow Entitlements, from PJM to the external capacity resource.¹⁷⁸ AMP explains that PJM is best suited to address such issues with external Balancing Authorities through such mechanisms as the JCM.¹⁷⁹ Similarly, Dynegy and Tilton assert that, while they agree that PJM should be allocated Firm Flow Entitlements for a market-to-market flowgate impacted by a pseudo-tie, it is unreasonable for PJM to require a seller to obtain written acknowledgement from MISO that such entitlements will be allocated to PJM when the treatment of Firm Flow Entitlements are products of PJM's agreement with MISO as set forth in the JOA.¹⁸⁰

¹⁷⁵ IMEA Second Protest at 18.

¹⁷⁶ Dynegy and Tilton Protest at 6-7.

¹⁷⁷ Tilton Comments at 3-4.

¹⁷⁸ AMP First Protest at 11.

¹⁷⁹ *Id.*

¹⁸⁰ Dynegy and Tilton Protest at 8.

96. NYISO argues that PJM's proposed requirement ignores the fact that any use PJM makes of an external Balancing Authority's transmission system is an incremental addition to the native Balancing Authority's own use of its transmission system to serve that external Balancing Authority's native load customers.¹⁸¹

c. Answers

97. PJM states that obtaining written acknowledgement of tagging assurances from an external Balancing Authority does not unduly burden an external resource because, when requested, Balancing Authorities have an obligation to confirm that a non-tagged transaction is subject to a congestion management program and registered in the NERC registry.¹⁸² Continuing, PJM argues it is reasonable to require a Capacity Market Seller to make such a request and obtain the needed written confirmation because the seller is the party responsible for establishing that its resource meets the PJM eligibility requirements.¹⁸³

98. PJM states that PJM and MISO have coordinated application of rules for Firm Flow Entitlements for pseudo-ties as part of a larger solution to address overlapping congestion counting concerns.¹⁸⁴ PJM states that it will soon file a solution addressing congestion overlap, that requires transfer of Firm Flow Entitlement impacts from pseudo-ties from the native Balancing Authority to the attaining Balancing Authority prior to running the day-ahead market model, thereby enabling a more accurate projection of congestion and day ahead energy prices for a pseudo-tied external generation resource.¹⁸⁵ PJM states that updates to the Firm Flow Entitlements are forthcoming in conjunction with development of a long-term solution to the freeze date initiative, which is being

¹⁸¹ NYISO Protest at 23-25.

¹⁸² PJM First Answer at 20.

¹⁸³ *Id.*

¹⁸⁴ PJM Deficiency Response at 8.

¹⁸⁵ *Id.* PJM and MISO have each filed JOA revisions to address congestion charge overlap issues. *See* Docket Nos. ER18-137-000, ER18-137-001, ER18-136-000, and ER18-136-001.

prepared in coordination with MISO and members of the Congestion Management Process Group.¹⁸⁶

d. Commission Determination

99. We find that PJM's requirement that an external resource seeking to pseudo-tie to PJM obtain written acknowledgment that an external resource will not be subject to NERC tagging is a just and reasonable measure to ensure PJM's ability to dispatch pseudo-tied resources comparable to internal resources. We agree with PJM that this requirement is necessary to allow PJM sufficient unit-specific visibility such that it can assess resource performance for pseudo-tied resources and accurately apply non-performance charges in accordance with the Capacity Performance requirements.

100. We find that the Firm Flow Entitlement requirement imposes a reasonable condition on external generators seeking to pseudo-tie to PJM that balances operational and economic considerations of the electric system and PJM's stakeholders. We find that this requirement ensures that PJM can model a coordinated flowgate at a limit that appropriately reflects the capacity obligation of a pseudo-tied resource with a capacity supply obligation. We find that it is just and reasonable for PJM to expect to receive the full capacity service for which a resource would be compensated, and this requirement enables such comparable treatment of external resources vis-à-vis internal resources, which do not implicate coordination of market-to-market flowgates or modeling agreement with external transmission providers. We agree that PJM's imposed eligibility criteria is further justified in that it limits PJM's exposure to market-to-market payments and potential TLR curtailments during periods when flowgates may be constrained.

101. Though the prevailing allocations of Firm Flow Entitlements, particularly between MISO and PJM based on the freeze date, may create a challenge for new resources seeking to obtain these rights, we do not agree with protestors that it is an unjust and unreasonable requirement. As a fundamental matter, we find that this requirement reasonably imposes obligations on pseudo-tied resources to ensure PJM can accurately model and procure the full amount of capacity that an external capacity resource is obligated to deliver. Also, we are not persuaded by the arguments that external resources lack recourse to obtain Firm Flow Entitlements because additional Firm Flow Entitlements can be created by transmission upgrades that expand the capability of the system. Such upgrades are often required to accommodate requests for long-term firm transmission service.

102. Finally, in response to the arguments raised by NYISO, we again note that no

¹⁸⁶ PJM Deficiency Response at 8. See Docket No. ER18-137 and ER18-137-001.

pseudo-ties currently exist between NYISO and PJM, but if this were to change, PJM and NYISO would need to develop pseudo-tie coordination rules between their two Balancing Authorities.

7. Firm Transmission Requirements

a. PJM's Filing

103. PJM proposes a firm transmission requirement that would require an external resource that wishes to pseudo-tie into PJM arrange for the evaluation of long-term firm point-to-point transmission service with rollover rights for deliverability from the unit-specific physical location of the resource to PJM load, in a manner comparable to the deliverability of capacity required from PJM-internal resources to PJM load.¹⁸⁷ PJM states that it is reasonable to require any generator (whether internal or external) that wishes to be a Capacity Resource serving PJM load to meet the same requirement for deliverability to that load. PJM states that a single deliverability requirement ensures that (1) PJM loads are not relying on Capacity Resources outside PJM that are less deliverable than Capacity Resources inside PJM and (2) internal and external resources compete on an even basis to become PJM Capacity Resources.¹⁸⁸

104. PJM similarly proposes that for transmission within PJM, external resources must arrange for Network External Designated Transmission Service, which is the same service PJM proposes to require for internal generation.¹⁸⁹ Network External Designated Transmission Service is defined as “the quantity of network transmission service confirmed by PJM for use by a market participant to import power and energy from an identified Generation Capacity Resource located outside the PJM Region, upon demonstration by such market participant that it owns such Generation Capacity Resource, has an executed contract to purchase power and energy from such Generation Capacity Resource, or has a contract to purchase power and energy from such Generation

¹⁸⁷ PJM Transmittal at 16.

¹⁸⁸ *Id.*

¹⁸⁹ *Id.* at 17. PJM explains that Network External Designated Transmission Service is already defined in the RAA, and PJM is revising the Tariff to add this same definition. *See* proposed Tariff, Attachment DD, section 5.5A(b)(ii).

Capacity Resource contingent upon securing firm transmission service from such resource.”¹⁹⁰

b. Comments and Protests

105. NCEMC, Brookfield, and AWEA all protest PJM’s firm transmission requirement. Brookfield argues that PJM’s proposal to impose this deliverability requirement on external Balancing Authorities undermines the granting and utilization of firm transmission reservations and thus represents a collateral attack on the Commission’s open access transmission policies.¹⁹¹ Brookfield argues that PJM has not justified the need for a neighboring transmission provider to provide yet another level of firm service and that the Commission has determined that firm point-to-point transmission service and Network Integration Transmission Service have the highest curtailment priority, with curtailments being implemented only after all possible curtailments from non-firm transmission customers have occurred.¹⁹²

106. AWEA states that a resource clearing a PJM capacity auction only has a service period for a single year and explains that firm transmission service with rollover rights requires, in most circumstances, a five year service commitment.¹⁹³

107. AWEA argues that this requirement imposes a substantial economic burden on external resources participating in the PJM capacity auctions.¹⁹⁴ Similarly, NCEMC argues that the costs associated with a five-year firm transmission service agreement would become stranded if an entity, such as NCEMC, found it necessary to request an exception from the must-offer obligation – an option available to all internal and external resources under existing capacity market rules – and delist all or a portion of the external

¹⁹⁰ PJM RAA, Article 1.

¹⁹¹ Brookfield First Protest at 8, 10.

¹⁹² *Id.* at 10, n. 24 (citing Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 928 (“[W]e are not changing the relative priorities applicable to firm point-to-point service, network integration service and service to bundled native load. These services do, and will continue to, share the same priority – the highest priority of firm service on the transmission provider’s system.”)).

¹⁹³ AWEA Protest at 4 (citing Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 86).

¹⁹⁴ *Id.* at 4.

capacity cleared in a capacity auction, in any given Delivery Year, in order to serve its loads in the DEC and/or DEP Balancing Authority Areas or if the unit needed to retire.¹⁹⁵

108. NCEMC states that it currently pays approximately \$4 million each year for long-term firm transmission service arrangements supporting its external resources offered into PJM's capacity auction. NCEMC explains that, if during the first year of a five-year service agreement the owner of an external resource was found to no longer be eligible to pseudo-tie, the results in the case of NCEMC would be \$16 million in stranded costs. While NCEMC states that it could attempt to mitigate its losses through resale, these sales are often only for pennies on the dollar.¹⁹⁶

109. NCEMC argues that the firm transmission with rollover rights requirement is discriminatory to external resources, as internal resources have no comparable obligation. NCEMC argues that, in approving the CIL Order, the Commission noted the comparable obligation imposed on internal resources to the confirmed firm transmission service obligation for external resources is the execution of an Interconnection Service Agreement.¹⁹⁷ NCEMC argues that there is no time limitation on an Interconnection Service Agreement and that it may be terminated by mutual consent, or unilaterally by the customer, at any time. NCEMC also argues that internal resources have no obligation to obtain or maintain network transmission service or firm point-to-point transmission service with rollover rights to remain a capacity resource.¹⁹⁸ NCEMC states that the current one-year transmission service requirement is consistent with the manner in which internal resources are treated, since internal resources may delist in any given year, on an annual basis, due to physical unavailability caused by retirement or the sale of the capacity outside of PJM through a bilateral transaction.¹⁹⁹

110. NCEMC states that the Commission has previously rejected PJM's proposal to impose a five-year transmission service agreement requirement on pseudo-tied resources. NCEMC explains that, in that proceeding the Commission found that PJM had "...not provided any evidence to demonstrate that the proposed requirement for a firm transmission service arrangement that includes rollover rights is necessary to support a

¹⁹⁵ NCEMC First Protest at 18.

¹⁹⁶ *Id.* at 19.

¹⁹⁷ *Id.* at 20 (citing CIL Order, 147 FERC ¶ 61,060 at P 48).

¹⁹⁸ *Id.* at 20-21.

¹⁹⁹ *Id.* at 22.

Capacity Import Limit exception for an external resource.”²⁰⁰ NCEMC argues that PJM has not provided evidence to justify revisiting the Commission’s earlier decision. NCEMC argues that this proposed tariff change is unrelated to any concern regarding resource adequacy or reliability in the PJM region and that the Commission should reject this requirement as a collateral attack on its prior ruling.²⁰¹

c. Answers

111. PJM argues that external transmission providers can and do assess firm deliverability differently, in some respects, as compared to PJM, such as the use of certain thresholds to require reinforcement of the external transmission provider’s system(s), and different means of demonstrating compliance with NERC transmission planning (TPL) criteria.²⁰²

112. PJM argues that this firm transmission with rollover rights requirement is reasonable since PJM’s capacity auction occurs three years before the Delivery Year. PJM argues that sellers offering external generation resources into the PJM capacity auctions must agree that, if their offer clears and their resource becomes a Generation Capacity Resource, the seller must continue to offer the resource into the capacity auctions for each subsequent Delivery Year, so long as it remains a Generation Capacity Resource. PJM argues that rollover rights are the Commission-established mechanism for a transmission customer to retain its transmission service beyond its initially stated term and, accordingly, to satisfy its ongoing capacity auction must-offer requirement, a seller of an external Generation Capacity Resource must have the assurance of continued transmission service embodied in rollover rights.²⁰³

113. PJM argues that in the prior Commission order related to firm transmission with rollover rights, the Commission declined to accept the proposed addition of rollover rights to the transmission service requirement for a CIL exception, which only applied to a subset of external resources that provided capacity to PJM or which were planning to be Capacity Performance resources. PJM explains that for all future capacity auctions, all resources must be Capacity Performance Resources. PJM argues that ensuring that an

²⁰⁰ *Id.* at 17 (citing *PJM Interconnection, LLC*, 155 FERC ¶ 61,303, at P 20 (2016)).

²⁰¹ *Id.* at 21.

²⁰² PJM First Answer at 24-25.

²⁰³ *Id.* at 22-23.

external resource acquires the transmission services needed to meet its ongoing capacity market must-offer obligation is reasonable.²⁰⁴

d. Commission Determination

114. We find PJM's requirement for long-term firm transmission rights with rollover rights for external resources is just and reasonable because it treats external and internal resources comparably under PJM's Capacity Performance construct, by requiring that these resources be similarly responsible for the delivery of capacity to the PJM market. Without a requirement that external resources obtain long-term transmission rights, an external resource could clear PJM's capacity market for one year and then be unable to fulfill its existing tariff obligation to offer in the succeeding auction if it were unable to re-acquire firm transmission rights. PJM's proposal mitigates that possibility. In addition, we find the requirement to have this type of firm transmission service is a necessity because PJM will not re-evaluate a pseudo-tied resource for firm transmission service going forward.

115. NCEMC, Brookfield, and AWEA protest PJM's proposed firm transmission with rollover rights requirement. Brookfield argues that PJM has not justified the need for a neighboring transmission provider to provide yet another level of firm service. PJM argues that external transmission providers can and do assess firm deliverability differently, in some respects, as compared to PJM, such as the use of certain thresholds to require reinforcement of the external transmission provider's system(s), and different means of demonstrating compliance with NERC transmission planning (TPL) criteria. We find that it is reasonable to hold external resources to PJM's firm transmission with rollover rights requirement, because discrepancies between PJM's system and an external system may exist that would prevent the resource from re-acquiring firm transmission rights. Here, PJM seeks to apply comparable transmission standards to all resources, whether they are internal to PJM or located external in another Balancing Authority Area.

116. AWEA argues that a resource clearing a PJM capacity auction only has a service period for a single year and explains that firm transmission service with rollover rights requires, in most circumstances, a five year service commitment. PJM states that Capacity Market Sellers offering external generation resources into the PJM capacity auctions must agree that, if their offer clears and their resource becomes a Generation Capacity Resource, the seller must continue to offer the resource into the capacity auctions for each subsequent Delivery Year, so long as it remains a Generation Capacity Resource. PJM contends that rollover rights are the Commission-established mechanism for transmission customers to retain their transmission service beyond its initially stated term and, accordingly, to satisfy its ongoing capacity auction must-offer requirement.

²⁰⁴ *Id.* at 23-24.

We find that to continue to meet the must-offer obligation, it is just and reasonable to require an external resource to provide assurance to PJM that the resource is deliverable to PJM in a manner comparable to that of an internal resource's deliverability to PJM.

117. AWEA and NCEMC argue that requiring firm transmission with rollover rights could result in substantial economic burden on external resources that wish to participate in the PJM capacity auctions. NCEMC argues that based on the amount it currently pays for firm transmission service, curtailment of its pseudo-ties could result in losses of up to \$16 million. We do not find these arguments compelling because a seller of an external resource that requests, and then successfully pseudo-ties into PJM can reflect, in its Sell Offer, the additional risk of a five year firm transmission service reservation that provides rollover rights given the potential of having a sunk cost if it did not clear in the capacity auction during all five years covered by the transmission service reservation. Additionally, external generating resources have five years before the new rules take effect and can decide whether the additional requirements outweigh the potential benefits of participating in PJM's markets.²⁰⁵ We, therefore, accept PJM's proposal and find that it is consistent with PJM's need to ensure that an external generating resource seeking to pseudo-tie into PJM will be reliable and deliverable.

118. NCEMC states that the Commission has previously rejected PJM's proposal to impose a five-year transmission service agreement requirement on pseudo-tied resources and argues that PJM has not provided evidence to justify revisiting the Commission's earlier decision. NCEMC argues that this proposed tariff change is unrelated to any concern regarding resource adequacy or reliability in the PJM region and that the Commission should reject this requirement as a collateral attack on its prior ruling. We disagree. In accepting PJM's Capacity Performance proposal, the Commission found that "External Generation Capacity Resources be required to meet the criteria for

²⁰⁵ See PJM Tariff, Schedule 7, "Effective December 1, 2004, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc. obtained pursuant to requests submitted on or after November 17, 2003, for service commencing on or after April 1, 2004. Effective April 1, 2006, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc." See *Alliance Companies*, 100 FERC ¶ 61,137, at PP 49-52 (2002), *order on clarification*, 102 FERC ¶ 61,214, *order on reh'g and clarification*, 103 FERC ¶ 61,274, *order denying reh'g and granting clarification*, 105 FERC ¶ 61,215 (2003), *appeal docketed sub nom. American Electric Power Service Corp. v. FERC*, No. 03-1223 (D.C. Cir. Aug 1, 2003).

obtaining an exception to PJM's Capacity Import Limit (including the requirement that such resources be pseudo-tied to PJM by the relevant delivery year) to be eligible to submit a Capacity Performance Resource offer" and that "...this requirement is necessary to ensure that external resources are accountable for their individual performance when PJM's system is experiencing Emergency Actions." We find that in the prior Commission order, the Commission declined to accept PJM's proposed addition of rollover rights to the firm transmission service requirement for a CIL exception, which only applied to a subset of resources for PJM's prior capacity product or resources which were planning to be Capacity Performance resources, and that, consistent with our finding stated in *supra* P 116, to continue to meet the on-going must-offer obligation, an external resource must provide assurance to PJM that, at the time it offers into the capacity auction, that resource is deliverable to PJM in a manner comparable to that of an internal resource's deliverability to PJM.

8. Transition Period

a. PJM's Filing

119. In order to recognize equitable concerns for Capacity Market Sellers of resources that previously satisfied PJM's current pseudo-tie requirements, and that are relying on that pseudo-tie to serve their customers, PJM proposes a five-year transition period for those resources to comply with PJM's proposed pseudo-tie requirements. However, PJM explains that because the equitable concerns cannot moot any operational concerns that may arise for these resources, PJM is proposing standards to address operational deliverability concerns that may arise during the transition period.²⁰⁶ PJM refers to these resources as Prior CIL Exception External Resources, which are external Generation Capacity Resources for which a Capacity Market Seller had, prior to May 9, 2017, cleared a Sell Offer in a capacity auction. PJM incorporates this new definition into the RAA.²⁰⁷ PJM proposes to make the 2017/2018 Delivery Year the first year transition year to allow Prior CIL Exception External Resources to meet the new standards, and will allow the exception up until the 2021/2022 Delivery Year.²⁰⁸

120. PJM describes two scenarios under which an external resource may continue to be granted the Prior CIL Exception External Resource status and avoid the new standards: if the resource is (1) owned by a Load Serving Entity and used to self-supply (under arrangements initiated before June 1, 2016, with a duration of at least ten years) such

²⁰⁶ PJM Transmittal at 12-13.

²⁰⁷ *Id.* at 17, *see* proposed Tariff, Definitions O-P-Q.

²⁰⁸ *Id.* at 18, 20.

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.²⁰⁹ PJM states that, under the first scenario, the seller is allowed to continue the exception from section 5.5A(b) for the life of the resource. In the second scenario, PJM states that the seller may continue the exception for the entire term of the relevant agreement.²¹⁰

121. PJM explains that the exception in section 5.5A(c) of the Tariff is contingent on external transmission providers continuing to honor the firm status of the Capacity Market Seller's transmission service for all Delivery Years for which the seller offers such resource under the exception and on an Operationally Deliverable requirement, discussed in the next section of this order.²¹¹

b. Comments and Protests

122. While P3, Duke, and Exelon support the transition period proposal applicable to CIL Exception External Resources, they request certain clarifications. P3 and Exelon argue that the transition period should be as short as possible and be limited to the duration of existing long-term firm transmission service agreements held for these resources (without considering any roll-over of existing service that has not been exercised), but no longer than five years (subject to the exception for self-supply/long-term agreements entered into prior to June 1, 2016).²¹²

123. The PJM IMM states that it is not appropriate to allow existing external generation capacity resources to be noncompliant with the new pseudo-tie requirements through the 2021/2022 Delivery Year and argues that the must offer requirement should be lifted for all existing external capacity resources that do not meet the new standards.²¹³ The PJM IMM argues that grandfathered arrangements are unnecessary and will have negative impacts on both the economics and reliability of the PJM markets because the capacity auctions provide the parties with alternatives to their current supply arrangements and 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 a capacity auction. The PJM

²⁰⁹ *Id.* at 18, *see* proposed Tariff, Attachment DD, section 5.5A(c).

²¹⁰ PJM Transmittal at 18.

²¹¹ *Id.*

²¹² P3 Comments at 3; Exelon Comments and Limited Protest at 3.

²¹³ PJM IMM Comments at 6-7.

IMM argues that 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 capacity auctions as Capacity Performance resources. The PJM IMM asserts that grandfathering also provides a cost advantage, which may allow these resources to displace internal generation that must meet all market standards.²¹⁴

124. Duke protests as unreasonable the proposed requirement for an external generation resource with a pseudo-tie to clear the capacity auction before it is considered a Prior CIL Exception Resource. Duke argues that “cleared” should be replaced with “offered” and states that there could be confusion to which year prior capacity auction PJM will use to determine the amount of MWs that cleared. Duke notes that “cleared” is not defined anywhere. Duke states that the full offer, which has firm transmission, may not clear the capacity auction and it would be unreasonable to prohibit consideration of the MWs that did not clear the capacity auction as a Prior CIL Exception External Resource.²¹⁵ Similarly, Dayton and EKPC request clarification that the entire grandfathered pseudo-tied resource cleared with a Sell Offer in a capacity auction under the CIL exception be treated as a Prior CIL Exception External Resource, since clearing the capacity auction is dependent on economics and not deliverability.²¹⁶

125. Dayton and EKPC understand that different proposed changes to the Tariff and the RAA may require more or less time to implement, but request that PJM and the Commission consider how the consistency and predictability of transition periods may make compliance with Tariff and RAA changes less of an administrative burden on all involved and request clear identification, in advance, of the standards for determining the transition period.²¹⁷

126. Brookfield argues that PJM’s proposal to grandfather only a subset of existing external resources is unduly discriminatory against other similarly situated external resources without any legitimate justification.²¹⁸ Brookfield states that there is no meaningful distinction between external resources with long-term contracts with PJM

²¹⁴ *Id.* at 7-8.

²¹⁵ Duke Comments at 3.

²¹⁶ Dayton and EKPC Comments at 6.

²¹⁷ *Id.* at 7-8.

²¹⁸ Brookfield Protest at 23-24.

load and external resources offering capacity into the PJM capacity auction.²¹⁹ Similarly, Dynegy and Tilton argue that PJM has not explained why it is appropriate to provide long-term exceptions for certain resources while refusing to exempt other resources that will likely be using substantially similar pseudo-tie arrangements and that the Commission should reject PJM's proposal. Dynegy and Tilton argue, in light of the fact that sellers have already made investments in pseudo-ties, the Commission should direct PJM to (1) treat the entirety of a pseudo-tied resource, rather than just the portion that cleared in a prior RPM auction, as a Prior CIL Exception External Resource; and (2) exempt all Prior CIL Exception External Resources from the pseudo-tie requirements for the entire duration of such resources' pseudo-tie arrangements.²²⁰

127. IMEA argues that when PJM began modeling ComEd as a separate LDA from the rest of the RTO, it created an internal resource requirement for the Fixed Resource Requirement (FRR) Alternative,²²¹ which is the self-supply mechanism under PJM's capacity construct. IMEA asserts that beginning with the 2017 capacity auction for the 2020/2021 Delivery Year, unless a resource is pseudo-tied into PJM by June 1, 2020, that resource will not be allowed to participate in the PJM capacity auctions or as an FRR resource.²²² AEP states that it supports PJM's proposal but requests that PJM clarify that pseudo-tied resources previously accepted in a FRR Capacity Plan should also be considered Prior CIL Exception External Resources during the transition period.²²³

c. Answers

128. In response to the protests, PJM argues that five years is a reasonable time for sellers to update all of their arrangements as needed to comply with the new rules. PJM argues that the Commission should not adopt P3 and Exelon's request to limit the transition period to the duration of existing long-term firm transmission contracts.²²⁴

²¹⁹ *Id.* at 24.

²²⁰ Dynegy and Tilton Protest at 12-13.

²²¹ The FRR Alternative is another method for an entity to satisfy its obligation to provide unforced capacity, as set forth in PJM's Reliability Assurance Agreement, Schedule 8.1.

²²² IMEA Second Protest at 8-9.

²²³ AEP Comments at 4-5.

²²⁴ PJM First Answer at 35.

129. PJM states that it opposes Dynegy and Tilton's request to grant the entire duration of a resource's pseudo-tie arrangement for each Prior CIL Exception External Resource because it would exempt a resource from the new requirements in perpetuity since pseudo-ties are not given a termination date when they are established. PJM argues that Dynegy and Tilton's proposal is too broad to be useful or easily implemented since a pseudo-tie may be in place without a capacity obligation.²²⁵

130. In response to Brookfield, PJM states that it is providing the extension of Prior CIL Exception External Resource treatment to sellers, which are Load-Serving Entities with long-term obligations to serve PJM loads, precisely because these resources are unique as compared to sellers with external resources that have cleared a capacity auction but do not have a locked-in, long-term obligation to serve a particular PJM load. PJM explains that sellers which are Load Serving Entities could be exposed to paying twice for capacity if capacity the Load Serving Entities built or procured through a long-term Power Purchase Agreement does not clear a capacity auction and its associated load is still required to bear its share of capacity charges.²²⁶

131. PJM asserts that the failure to provide accommodation for prior pseudo-tied resources in an FRR Capacity Plan was a drafting oversight. According to PJM, whether a resource with a previously approved pseudo-tie cleared an auction or was included in an FRR Capacity Plan, the equities and reliance interests are the same. As such, PJM asserts that FRR resources should be treated similarly to Prior CIL Exception External Resources. PJM states that it would either accept a compliance filing directive or make a separate section 205 filing in the near future to correct this apparent drafting oversight.²²⁷

132. PJM clarifies that an external resource that has cleared a Sell Offer in any capacity auction prior to May 9, 2017 would qualify for the transition period.²²⁸

133. PJM states that IMEA fails to point to any of PJM's revisions that would affirmatively prevent IMEA from fulfilling an obligation under the Dynamic Transfer Agreement. PJM also states that if IMEA's self-supply and long-term supply arrangements are as they have described them, it is likely that IMEA will be eligible to avail itself of a transition period for the life of a self-supply asset or for the life of the long-term contract, as applicable. PJM states that IMEA argues that its Dynamic

²²⁵ *Id.* at 35-36.

²²⁶ *Id.* at 36-37.

²²⁷ *Id.* at 32.

²²⁸ PJM Deficiency Response at 22.

Transfer Agreement and statutory rights entitle it to lifetime grandfathering into PJM's capacity market and that PJM should grandfather IMEA's external generators into the PJM capacity market by providing them with the same treatment as PJM has provided to the Niagara and St. Lawrence Hydro generation facilities. PJM argues that the type of blanket exemption requested by IMEA is inconsistent with PJM's right as an RTO to revise its Tariff to include forward-looking protections for its markets and loads.²²⁹

d. Commission Determination

134. We find that the five year transition period is just and reasonable because it allows external resources to make all of the necessary arrangements to meet the new pseudo-tie requirements. Further, PJM's proposal strikes an appropriate balance between addressing potential operational concerns while still allowing external resources with an existing obligation for a future Delivery Year to continue their participation in the PJM capacity auctions.

135. We find that exempting all external arrangements for resources, specifically arrangements that are neither a resource (1) owned by a load serving entity and used to self-supply its load in PJM or (2) subject to 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, would essentially skirt around the proposed pseudo-tie requirements by not complying with the post-transition requirements. We therefore reject Dynegy and Tilton's request to exempt all Prior CIL Exception External Resources from the pseudo-tie requirements for the entire duration of such resources' pseudo-tie arrangements. By contrast, PJM explains that sellers that are also load serving entities that self-supply or have the long-term contracts in place could end up paying twice for capacity if the capacity the load serving entities built or procured through a long-term power purchase agreement does not clear a capacity auction and its associated load is still required to bear its share of capacity charges. We agree with PJM. These sellers that are load serving entities are thus situated differently from other sellers that may have long-term arrangements but do not self-supply and are not exposed to paying twice for capacity. We therefore reject the arguments that PJM should apply these two exceptions to the post-transition requirements these rules to all Prior CIL Exception External Resources.

136. We agree with PJM that an external resource must have actually cleared in order to be considered a Prior CIL Exception External Resource. Also, PJM proposes to include in the definition of a Prior CIL Exception External Resource that "In the event only a portion (in MW) of an external Generation Capacity Resource has a Pseudo-Tie

²²⁹ PJM Third Answer at 5-7.

into the PJM Region, that portion of the external Generation Capacity Resource (and no other portion thereof) is eligible for treatment as a Prior CIL Exception External Resource...”²³⁰ While not specified in the filing, and noting that resources may have cleared different amounts in different capacity auctions, we interpret PJM’s proposal to limit the MW capacity of an external resource that has cleared a capacity auction to be eligible for the transition period and to be a Prior CIL Exception External Resource to the maximum number of MWs that was cleared in a prior capacity auction. Therefore we accept, subject to condition, PJM’s proposed transition period. To ensure the clarity of its Tariff, PJM must amend its definition of Prior CIL Exception External Resource to specify that “Prior CIL Exception External Resource” shall mean an external Generation Capacity Resource for which a Capacity Market Seller had, prior to May 9, 2017, cleared a Sell Offer in an RPM Auction under the exception provided to the definition of Capacity Import Limit as set forth in Article I of the Reliability Assurance Agreement. In the event only a portion (in MW) of an external Generation Capacity Resource has a Pseudo-Tie into the PJM Region, that portion of the external Generation Capacity Resource, which can include up to the maximum amount cleared in any prior capacity auction (and no other portion thereof), is eligible for treatment as a Prior CIL Exception External Resource if such portion satisfies the requirements of the first sentence of this definition.” PJM must make this revision within 30 days of the date of this order.

137. Dayton and EKPC request that PJM and the Commission clearly identify, in advance, what the standards for determining the transition period will be, noting that various other proposals have had different transition periods. In general, the Commission evaluates each proposal independently to determine the appropriate transition period for a market rule. PJM’s filing strikes an appropriate balance by allowing for a transition period that permits Prior CIL Exception External Resources to remain pseudo-tied to PJM, while making any arrangements necessary before being required to meet the new standards and criteria that will apply to all new external resources that wish to establish a pseudo-tie.

138. We find that PJM’s proposal is necessary to ensure the obligations of external resources, whether pseudo-tied or FRR Alternative, align more closely with internal resources. Under PJM’s proposal, we find that FRR entities that meet PJM’s requirements for external capacity are eligible to satisfy their obligation in order to ensure reliable service to loads in PJM through either self-supply or bilateral agreements.²³¹ While pseudo-tied resources within an FRR capacity plan do not participate in the PJM RPM, we agree with AEP and IMEA that they meet “all applicable requirements to be

²³⁰ See PJM proposed Tariff, Definitions – O – P – Q.

²³¹ See Proposed RAA, Schedule 8.1, section D.5.

treated as equivalent to PJM Region internal generation.”²³² As such, we agree with PJM and accept its proposal, subject to condition that PJM revised the definition of Prior CIL Exception External Resources in its Tariff to clarify that FRR resources can satisfy the conditions to be a Prior CIL Exception External Resource. We require PJM to revise tariff within 30 days of the date of this order.

9. Operational Deliverability Requirements

a. PJM’s Filing

139. As mentioned above, in order to remain eligible for a pseudo-tie during the five year transition period, a Prior CIL Exception External Resource must remain Operationally Deliverable. PJM proposes to add this definition: “as determined by the Office of the Interconnection, that there are no operational conditions, arrangements or limitations experienced or deliverability of capacity or energy from the external Generation Capacity Resource to loads in the PJM Region in a manner comparable to the deliverability of capacity or energy to such loads from Generation Capacity Resources located inside the metered boundaries of the PJM Region, including, without limitation, an identified need by an external Balancing Authority Area for a remedial action scheme or manual generation trip protocol, transmission facility switching arrangements that would have the effect of radializing load, or excessive or unacceptable frequency of regional reliability limit violations or (outside an interregional agreed congestion management process) of local reliability dispatch instructions and commitments.”²³³

140. PJM explains that the Operationally Deliverable standard is more accommodating than the post-transition period standards it has proposed in the instant filing and is designed to focus on practical problems that may arise that threaten deliverability of the resource to PJM load. PJM explains that the Operationally Deliverable standard considers whether, even if a resource might not have been able to meet the PJM deliverability standard when the pseudo-tie began, there are any experienced or required conditions that will threaten or degrade delivery of energy or capacity from the resource to load.²³⁴

141. PJM explains that it will notify a seller of a Prior CIL Exception External Resource by October 1 of the Delivery Year if a pseudo-tied resource is no longer

²³² AEP Comments at 2 (citing PJM Transmittal at 5).

²³³ PJM Transmittal at 18-19. *See* proposed Tariff, Definitions O-P-Q.

²³⁴ PJM Transmittal at 19.

Operationally Deliverable and allow the seller to choose one of three options:

(A) take the necessary actions to make such Prior CIL Exception External Resource Operationally Deliverable, in PJM's sole judgment, prior to the beginning of such Delivery Year, provided that PJM will, if transmission upgrades are required to make such resource Operationally Deliverable, facilitate the performance of transmission studies and otherwise cooperate with the external Transmission Provider of the system on which such upgrades are required to identify the upgrades required to meet PJM's deliverability standards;

(B) be relieved of its capacity obligation for such Delivery Year, with no entitlement to any capacity revenues based on such resource, with no requirement to seek replacement for such capacity for such Delivery Year, with no penalty for nonperformance or lack of commitment for such Delivery Year, and with no further must-offer obligation that would otherwise arise solely from clearing such capacity for such Delivery Year; or

(C) procure, by purchase or otherwise, replacement in a sufficient quantity to replace the capacity that would have been provided by the Prior CIL Exception External Resource but for PJM's determination that such resource is not Operationally Deliverable.²³⁵

142. PJM states that the seller of the Prior CIL Exception External Resource will be relieved of its obligation to continue offering the capacity of the Prior CIL Exception External Resource into the capacity auctions for any year after the last Delivery Year it is permitted to offer that resource under the old CIL exception rules.²³⁶

b. Comments and Protests

143. P3 and Exelon argue that the Commission should require PJM to clarify that, to the extent a CIL Exception External Resource is subsequently found not to be Operationally Deliverable, and exercises the option to be excused from its commitment without penalty, PJM will seek to procure capacity in the Third Incremental Auction to replace the excused resource, as this provision is absent from the proposed Tariff language.²³⁷

²³⁵ *Id.* at 19-20.

²³⁶ *Id.* at 20.

²³⁷ P3 Comments at 4; Exelon Comments and Limited Protest at 3-4.

144. Dayton and EKPC argue that PJM should allow a resource that was no longer Operationally Deliverable to timely resolve the operational concern before PJM declares it to no longer qualify for status as a Prior CIL Exception External Resource.²³⁸

145. Dayton and EKPC argue that if notification is provided by PJM to the seller of a Prior CIL Exception External Resource that it is no longer Operationally Deliverable, after October 1, the determination should not go into effect until the next Delivery Year, or at least not until sufficient time has passed to provide the resource an opportunity to resolve the identified operational concerns.²³⁹

146. Dayton and EKPC seek clarification that PJM will provide a detailed written report of the basis for its determination that a resource does not satisfy the Operationally Deliverable standard, and that PJM will provide the report in sufficient time for the generator to make any corrections needed and therefore not lose its status as a Prior CIL Exception External Resource.²⁴⁰

147. Dayton and EKPC request that PJM's decision that an existing pseudo-tied resource is not Operationally Deliverable will be reviewable, either through dispute resolution procedures under the PJM Tariff, or with the Commission. Dayton and EKPC request that expedited treatment should be given to resolution of disputes over PJM's determination to minimize consequences of being deemed non-deliverable.²⁴¹

148. Dayton and EKPC seek clarification that, if an external Balancing Authority declines to perform a deliverability study, or performs a study that PJM deems deficient, PJM will promptly perform the studies it deems necessary, or allow the generator to make an alternative showing.²⁴²

149. Brookfield argues that the Operationally Deliverable standard provides PJM with too much discretion as it allows PJM to determine "in its sole judgment" whether an External Resource can reliably provide capacity to PJM. Brookfield argues that the scope of PJM's review authority must be appropriately defined, limited and unambiguous. PJM's exercise of its judgment in administering the Operationally Deliverable test would

²³⁸ Dayton and EKPC Comments at 5.

²³⁹ *Id.* at 6.

²⁴⁰ *Id.*

²⁴¹ *Id.*

²⁴² *Id.* at 7.

effectively allow PJM to null and void a capacity obligation an External Resource secured in accordance with the existing market rules. Brookfield argues that the proposed application violates the rule against retroactive ratemaking, because external resource offers that cleared a capacity auction pursuant to the governing market rules could be rescinded based upon a new standard approved and implemented long after the obligation was incurred.²⁴³ AEE also argues that this standard would result in unlawful retroactive ratemaking that would upend existing pseudo-tie agreements and create uncertainty as to whether such agreements would meet PJM's requirements in the future.²⁴⁴ AMP and AWEA share similar concerns that this is a standard that places broad, unilateral discretion in the hands of PJM and has not been adequately explained.²⁴⁵

150. AWEA argues that PJM failed to articulate and defend its potential concerns that firm transmission service on an external system, which are subject to NERC requirements, would not be deliverable. AWEA argues that these issues take substantial time to resolve and may lead to complaints or declaratory judgments on whether a PJM rejection of another transmission providers' evaluations and assessments was reasonable.²⁴⁶

151. AMP argues that the three options available to a seller, in the event an external resource was found to fail the Operationally Deliverable standard, would result in considerable costs. AMP argues that the reason that the external resource was found to no longer be Operationally Deliverable could be beyond the seller's control. AMP argues that PJM treats the Prior CIL Exception External resources as marginal in the sense that all other users of the system have priority over the external resource seller's use and if a grant of transmission service to a new transmission customer were to adversely affect the Operational Deliverability of the Prior CIL Exception External Resource, it is up to the latter to take on the cost of curing the problem through one of the three options offered regardless of how long the subject pseudo-tie had been in operation before the new

²⁴³ Brookfield First Protest at 14-15. Brookfield argues that the Commission has previously found "the scope of PJM's review authority must be appropriately defined and limited." Capacity Performance Order at P 82 (stating "[t]he phrase 'to the satisfaction of the Office of the Interconnection' is too ambiguous and allows PJM too much discretion in determining whether a resource can meet the operational and performance requirements of Capacity Performance Resources.").

²⁴⁴ AEE Protest at 4.

²⁴⁵ AMP First Protest at 13; AWEA Protest at 7.

²⁴⁶ AWEA Protest at 7-8.

pseudo-tie request came along. AMP argues that this treatment is contrary to the requirements of open access transmission service.²⁴⁷

152. Dynegy and Tilton argue that PJM's Operationally Deliverable requirement should be rejected, and will result in substantial uncertainty, as PJM's standards with respect to deliverability may change from year to year. Dynegy and Tilton argue that PJM fails to explain why Prior CIL Exception External Resources should be subject to additional deliverability reviews when internal resources may also encounter operational conditions, arrangements, or limitations that could affect the deliverability of their capacity. Dynegy and Tilton argue that PJM fails to provide any reason why it is just and reasonable to impose these limitations on Prior CIL Exception External Resource given that those resources have met the requirements necessary to obtain a CIL exception.²⁴⁸

153. IMEA argues that the unilateral authority PJM seeks over pseudo-ties threatens the vested rights of market participants under sections 217(b)(2) and (4) of the FPA and 18 C.F.R section 42.1(d)(4).²⁴⁹ IMEA asserts that section 217(b)(2) of the FPA protects entities that have long-term historic generation and transmission rights to serve load. IMEA states that these vested rights cannot be compromised or eliminated by any restrictions or requirements that PJM may seek to impose on pseudo-ties.²⁵⁰ IMEA states that both MISO and PJM have already found IMEA's pseudo-tie generators to be deliverable, through the transmission reservation process of the tariff, through 2035. IMEA also states that PJM's proposed pseudo-tie requirements will prevent it from serving its loads in ComEd area because IMEA will not be allowed to sell into the PJM capacity market.²⁵¹

154. IMEA argues that section 217 provides protection for entities like IMEA that have long-term historic generation and transmission rights to serve load and that PJM's proposal should be rejected because PJM has failed to reconcile its sweeping changes to the tariff with the statutory and regulatory rights of entities like IMEA.²⁵² IMEA states that the "bright line" test for the Operationally Deliverable standard is unjust and

²⁴⁷ AMP First Protest at 14-15.

²⁴⁸ Dynegy and Tilton Protest at 14.

²⁴⁹ IMEA First Protest at 17. *See* 16 U.S.C. § 824q (2012).

²⁵⁰ IMEA First Protest at 13-16.

²⁵¹ *Id.* at 17-18.

²⁵² *Id.* at 13-14.

unreasonable because PJM has not explained why the proposed triggers (need for remedial action scheme, need for transmission facility switching arrangements, and need for dispatch override by external Balancing Authority or transmission operator) are so burdensome as to require the termination of a pseudo-tie. IMEA argues that failing the test will result in the load serving entity being deprived of its long-term, firm transmission rights and its rights to self-supply its own capacity service obligation with its designated Network Resources.²⁵³

155. In their protests, Brookfield and NCEMC also raise issues with PJM's proposal as related to its effect on a Load Serving Entity's ability to self-supply. NCEMC argues that PJM's proposal that external resources satisfy the eligibility test every year would unduly limit a Load Serving Entity's flexibility in deciding how best to serve its load and meet its capacity obligations each year. NCEMC states that Load Serving Entities must have the ability to rely on their own self-supplied resources, regardless of whether those resources are located within or outside PJM's borders.²⁵⁴ Brookfield argues that PJM's proposal to grandfather existing external resources with long-term contracts discriminates against other similarly situated external resources without any legitimate justification. Further, Brookfield argues that PJM does not demonstrate that there is a reliability-based reason to differentiate between external resources with long-term contracts with load and external resources that are pseudo-tied into the PJM market currently or have taken significant steps to pseudo-tie into the market.²⁵⁵

c. Answers

156. In response to Brookfield, AMP, and AWEA, PJM explains that the "broad" language is no broader than the previously approved Tariff language on operational or planning matters including "deliverability" itself, a key term at the heart of much of PJM's planning efforts.²⁵⁶ PJM provides several examples of the various scenarios where an operational concern with an external resource could arise, including interruption via a remedial action scheme, interruption via a transmission reconfiguration solution that isolates load, or interruption on a frequent basis to address local, native Balancing Authority reliability conditions. PJM states that it has not observed these conditions for existing pseudo-ties to date.²⁵⁷ PJM states that it has determined key triggers that it will

²⁵³ *Id.* at 33.

²⁵⁴ NCEMC First Protest at 27-28.

²⁵⁵ Brookfield First Protest at 24.

²⁵⁶ PJM First Answer at 39.

²⁵⁷ *Id.* at 40-42.

use when determining the ability of a Prior CIL Exemption External Resources to be deliverable to PJM: (1) Need for remedial action scheme or manual generation dump protocol to manage external transmission emergencies; (2) Need for transmission facility switching arrangements that would have the effect of radializing load in order to manage external transmission emergencies; and (3) Need for “out of market” external Balancing Authority or TOP directed dispatch instructions to manage excessive or unacceptable frequency of external regional reliability limit violations or (outside an interregional agreed congestion management process) of local reliability limit violations.²⁵⁸

157. PJM states that it will use a two-step process to declare a Prior CIL Exception External Resource to be operationally undeliverable. Step 1 would be to identify if any of the aforementioned triggers are met. Step 2 would validate the persistent nature of such triggers via coordination with the external entity. If for reasons other than transitory conditions (weather or temporary transmission equipment emergencies) that will persist into the future, PJM explains that it will deem the resource to be operationally undeliverable.²⁵⁹

158. PJM explains that certain instances that were not identified for the resource during the Transmission Service Request Study could make a Prior CIL Exception External Resource partially or completely undeliverable to PJM. PJM also notes that external generation resources need to use transmission facilities located in other Balancing Authorities that may or may not have standards as rigorous as PJM. PJM states that, during the proposed transition period, PJM expects that such studies may not have identified all of the necessary system reinforcements to reduce the potential for congestion and the need to re-dispatch generation under conditions that would not be necessary inside of the PJM region.²⁶⁰

159. Brookfield argues that PJM’s Operationally Deliverable standard would regularly subject a pseudo-tied resource to PJM’s continuing evaluation of deliverability each year, with the potential that the resource would have to fund new upgrades each year, which

²⁵⁸ PJM Deficiency Response at 16-17.

²⁵⁹ *Id.* at 17.

²⁶⁰ *Id.* at 18-19.

could allow PJM to potentially subject external resource to unlimited serial upgrade costs due to changes on PJM's system or the external system.²⁶¹

160. In response to Dayton and EKPC's concerns, PJM states that the Operationally Deliverable requirement as proposed already includes opportunities for sellers to cure their operational problem, replace the capacity, or walk away from their obligation without penalty. PJM states that it will notify sellers of deliverability issues by October 1 prior to the Delivery Year and work with sellers to help resolve operational deliverability issues. PJM states that this represents PJM's willingness to work with external resources to help resolve operational deliverability issues, should they arise. PJM states that a seller could pursue alternate dispute resolution under the Tariff or, if necessary, file a complaint with the Commission if the seller ultimately disagreed with PJM's determination that a Prior CIL Exception External Resource was not Operationally Deliverable.²⁶²

161. Regarding IMEA's concerns on the PJM-IMEA Dynamic Transfer Agreement, PJM states that it commits to work with IMEA to resolve any deliverability issues if they arise. PJM explains that a seller that self-supplies with external resources is precisely the situation PJM's extended CIL Exception for self-supply is meant to serve. PJM also states that the goal of the exception for Prior CIL Exception Resources is to accommodate, not exclude these resources unless deliverability issues demand action to cure or otherwise address any deliverability deficit.²⁶³

162. In response to P3 and Exelon, PJM clarifies that so long as the seller notifies PJM that it is seeking to be excused from its capacity commitment prior to posting of the Third Incremental Auction Planning Parameters for the Delivery Year, the excused MWs will be posted in such planning parameters and used in the determination of a PJM Buy Bid/Sell Offer in the Third Incremental Auction for that Delivery Year.²⁶⁴

163. PJM argues, in response to AMP, that an individual seller's cost concerns do not, and cannot, outweigh the fundamental requirement that capacity on which PJM loads are relying must be deliverable to PJM for the Delivery Year for which it was committed.²⁶⁵

²⁶¹ Brookfield Second Protest at 10-11; Brookfield Third Protest at 2-4.

²⁶² PJM First Answer at 43-44.

²⁶³ *Id.* at 44.

²⁶⁴ *Id.* at 45.

²⁶⁵ *Id.*

PJM disagrees with Brookfield's argument that this standard constitutes retroactive ratemaking, as PJM plans to apply the proposed deliverability standard prospectively and argues that PJM has not found any deliverability issues for the upcoming Delivery Year.²⁶⁶

164. In response to Brookfield's protest regarding self-supply, PJM states that unlike other resources, sellers that are Load Serving Entities could be exposed to paying twice for capacity if capacity the Load Serving Entity built or procured through a long-term Power Purchase Agreement does not clear a capacity auction and its associated load is still required to bear its share of capacity charges. PJM argues that this distinction supports its proposal to provide such sellers with an exception from the new requirements for the life of the resource's obligation to PJM customers.²⁶⁷ In response to IMEA, PJM states that it has not identified any operational deliverability issues that will affect sellers in the upcoming Delivery Year.²⁶⁸

165. In response to the claims made about retroactive rate making, PJM explains that it is not its intention to use its Operationally Deliverable test to disqualify external resources from participation in capacity auctions unless there is a true and persistent deficiency in the capability of energy to be delivered from the resource's native Balancing Authority to PJM. PJM explains that it will use a two-step process to determine whether a resource meets the Operationally Deliverable standard and only if there is a persistent deficiency will a Prior CIL Exception External Resource be deemed operationally undeliverable.²⁶⁹

166. PJM states that it is unreasonable to expect that it can never change its rules for evaluating deliverability on its transmission system, particularly when the generation and transmission technologies used on its system quickly change as new technologies are developed and brought to market and as conditions, rules, and technologies change in the external Balancing Authorities that host external resources as well.²⁷⁰ PJM argues that in prior cases, the Commission has found that tariff changes that modify capacity supply obligations were not retroactive ratemaking.²⁷¹ Similarly, PJM argues that its proposal

²⁶⁶ *Id.*

²⁶⁷ *Id.* at 37.

²⁶⁸ *Id.* at 44.

²⁶⁹ PJM Third Answer at 8-9.

²⁷⁰ *Id.* at 9.

²⁷¹ *Id.* at 10.

balances the interests and equities of sellers marketing capacity from either new or existing external capacity against both the need to ensure reliable delivery of electricity to PJM load and the equitable principle that rules for external resources should be comparable to those for internal PJM resources.²⁷²

167. PJM reiterates its counterpoint against Brookfield that PJM fails to provide a distinction between external resources that have long-term contracts with PJM and those that do not. PJM states that it is perfectly reasonable to allow a transition period that lasts for the life of the long-term Power Purchase Agreement.²⁷³ Also, PJM states that it has not proposed any changes to cost responsibility for transmission system upgrades in its proposal and argues that any discussion of cost responsibility is outside the scope of this proceedings.²⁷⁴

d. Commission Determination

168. We accept as just and reasonable PJM's proposal to require external generating resources to be Operationally Deliverable. We find that the Operationally Deliverable standard appropriately allows external generating resources to participate in PJM's market, while helping to ensure reliability by requiring that they be deliverable in a manner consistent with internal resources.

169. Several parties argue that the Operationally Deliverable standard gives PJM too much discretion or is too ambiguous. PJM argues that this standard is no broader than other planning provisions under the PJM Tariff, specifically when it comes to deliverability for planning. We agree. We find it appropriate for PJM to be afforded a certain amount of discretion under its Tariff to take any necessary precautions to ensure that capacity is deliverable when PJM needs it. This discretion avoids unnecessarily binding PJM's hands in the event that an actual issue arises. We note that PJM has provided several examples, which we find reasonable, of possible violations of the Operationally Deliverable standard, and we accept PJM's proposal with the expectation that actual violations would involve circumstances of similar severity. As PJM notes, resources found to be in violation of the Operationally Deliverable standard may avail themselves of dispute resolution procedures as provided for in the PJM Tariff or file a complaint under section 206 of the FPA, if they feel it is necessary.

²⁷² *Id.* at 11.

²⁷³ *Id.*

²⁷⁴ PJM Third Answer at 12-13.

170. P3 and Exelon argue that the Commission should require PJM to clarify that, to the extent a CIL Exception External Resource is subsequently found not to be Operationally Deliverable, and exercises the option to be excused from its commitment without penalty, PJM will seek to procure capacity in the third incremental auction to replace the excused resource, as this provision is absent from the proposed Tariff language. In response, PJM clarifies that, so long as the seller notifies PJM that it is seeking to be excused from its capacity commitment prior to posting of the third incremental auction planning parameters for the delivery year, the excused MWs will be posted in such planning parameters and used in the determination of a PJM buy bid/sell offer in the third incremental auction for that delivery year. We accept PJM's proposal, subject to the condition that PJM revise section 5.5A(c)(i)(B) of the Tariff to read as follows: "be relieved of its capacity obligation for such Delivery Year, with no entitlement to any capacity revenues based on such resource, with no requirement to seek replacement for such capacity as PJM will procure the replacement capacity in the Third Incremental Auction, with no penalty for non-performance or lack of commitment for such Delivery Year, and with no further must-offer obligation that would otherwise arise solely from clearing such capacity for such Delivery Year; or." PJM must submit conforming Tariff revisions within 30 days of the date of this order.

171. Next, Dayton and EKPC argue that, if PJM notifies the seller of a Prior CIL Exception External Resource that it is no longer Operationally Deliverable after October 1, the determination should not go into effect until the next Delivery Year, or at least not until sufficient time has passed to provide the resource an opportunity to resolve the identified operational concerns. We agree but find that PJM's proposal sufficiently addresses this concern. The purpose of notifying a seller of a Prior CIL Exception External Resource that it is no longer Operationally Deliverable is to address a reliability or delivery issue associated with the upcoming Delivery Year. Thus, we find that October 1, a full nine months before the resource is expected to operate, provides for sufficient time for PJM to both notify a seller to address any concerns with the external resource.

172. Also, Dayton and EKPC seek clarification that PJM will provide a detailed written report of the basis for its determination that a resource does not satisfy the Operationally Deliverable standard, and that PJM will provide the report in sufficient time for the generator to make any corrections needed and therefore not lose its status as a Prior CIL Exception External Resource. We note that proposed section 5.5A(c)(i) indicates that PJM will notify a seller if its external resource is no longer Operationally Deliverable and that PJM will provide such a seller with a written justification for failing this standard.

173. Also, Dayton and EKPC seek clarification that, if an external Balancing Authority declines to perform a deliverability study, or performs a study that PJM deems deficient, PJM will promptly perform the studies it deems necessary, or allow the generator to make an alternative showing. We find that coordination with an external Balancing Authority to perform a deliverability study for an external resource will be PJM's responsibility, including the responsibility to ensure that the study is not deficient in any way that may lead to operational or deliverability issues to PJM load. In the event that an external Balancing Authority declines to perform a deliverability study, PJM should coordinate with that external Balancing Authority and perform the study that was declined itself.

174. Brookfield and AEE argue that the application of the Operationally Deliverable standard constitutes retroactive ratemaking. We disagree. The rule against retroactive ratemaking prevents the Commission from adjusting current rates to make up for past over- or under-collections of costs.²⁷⁵ The rule is not violated here, because PJM is not changing the prior deliverability standard that it employed when judging whether a resource was deliverable for prior years. Rather, it is changing the deliverability standard to be applied for future deliverability years, with sufficient notice.

175. To the extent Brookfield and AEE argue that, as a matter of policy, the Commission should not permit a change to the deliverability requirement for the years 2017-2020, because they relied on the current deliverability standard in submitting their bids, the Commission has previously explained the distinction between retroactive ratemaking and upsetting the expectations of market participants.²⁷⁶ Even if retroactive ratemaking is not a concern, the Commission has considered market participants' reliance on existing tariff provisions in evaluating whether proposed tariff revisions are just and reasonable. In such cases, the Commission has engaged in a "balancing of interests" or "balancing of equities" in determining the appropriate outcome.²⁷⁷ In this case, we find

²⁷⁵ *Associated Gas Distributors v. FERC*, 898 F.2d 809, 810 (D.C. Cir. 1990) (Williams concurring); *NSTAR Elec. & Gas Corp. v. FERC*, 481 F.3d 794, 800 (D.C. Cir. 2007). *See also*, *Arkansas Louisiana Gas Co. v. Hall*, 453 U.S. 571, 577 (1981).

²⁷⁶ *ISO New England, Inc.*, 148 FERC ¶ 61,185, at P 29 (2014); *ISO New England, Inc.*, 145 FERC ¶ 61,095, at P 28 (2013). *See also*, Capacity Performance Order, 151 FERC ¶ 61,208 at P 261 ("PJM does not seek to retroactively revise the rules upon which it conducted the original 2016-2017 and 2017-2018 BRAs, but instead proposes incremental procurements, with separate payment structures, to ensure that reliability is met in those delivery years.").

²⁷⁷ *ISO New England Inc.*, 148 FERC ¶ 61,185 at P 29.

that PJM's proposal appropriately balances the interests and reasonable expectations of capacity resources against both the pressing need to ensure reliability and the equitable principle that, going forward, the rules for external resources should be comparable to those for internal PJM resources. Although Brookfield and AEE challenge the Operationally Deliverable standard as introducing a new standard for deliverability that was not in place when they assumed a capacity obligation, we find that the standard simply reinforces the very requirement that all capacity resources agree to fulfill when assuming a capacity obligation, namely, that the capacity for which they are paid, and upon which PJM and PJM load relies, must be deliverable for the Delivery Year for which it was committed. External generating resources should anticipate that PJM will seek to ensure deliverability, and that PJM will continuously re-evaluate and attempt to perfect its mechanisms for doing so.

176. AMP argues that—in the instance where PJM determines that an external resource is no longer Operationally Deliverable—the three alternative options proposed by PJM would result in substantial costs. For example, AMP argues that PJM's proposal essentially treats the Prior CIL Exception External resources as marginal in the sense that all other users of the system have priority over the external resource seller's use.²⁷⁸ AMP argues that if a grant of transmission service to a new transmission customer were to adversely affect the Operational Deliverability of the Prior CIL Exception External Resource, it is up to the latter to take on the cost of curing the problem through one of the three options offered regardless of how long the subject pseudo-tie had been in operation before the new pseudo-tie request came along.²⁷⁹ We find that AMP has not made a showing that there are substantial costs, since no resource has yet failed the Operationally Deliverable standard or that paying for such costs to remain deliverable to PJM is unjust or unreasonable. AMP has also not shown that granting additional transmission service to a new transmission customer will somehow result in an external resource, its own or that of another seller, somehow becoming undeliverable. We therefore reject AMP's arguments as speculative.

177. Dynegy and Tilton argue that PJM's Operationally Deliverable requirement should be rejected, and will result in substantial uncertainty, as PJM's standards with respect to deliverability may change from year to year. We disagree with Dynegy and Tilton and find that PJM has sufficiently addressed how it will apply the Operationally Deliverable standard and therefore reject the protest. We accept PJM's explanation in its Deficiency Response of how it will determine key triggers that it will use when evaluate the ability of a Prior CIL Exemption External Resources to be deliverable to PJM, subject

²⁷⁸ AMP First Protest at 14.

²⁷⁹ *Id.* at 14-15.

to condition that PJM must include in a new section 5.5A(c)(iv), the following: “PJM will determine key triggers for when a Prior CIL Exception External Resource will not be Operationally Deliverable, including the: (1) Need for remedial action scheme or manual generation dump protocol to manage external transmission emergencies; (2) Need for transmission facility switching arrangements that would have the effect of radializing load in order to manage external transmission emergencies; and (3) Need for “out of market” external Balancing Authority or TOP directed dispatch instructions to manage excessive or unacceptable frequency of external regional reliability limit violations or (outside an interregional agreed congestion management process) of local reliability limit violations.”²⁸⁰ PJM must make these revisions within 30 days of the date of this order.

178. IMEA argues that the unilateral authority PJM seeks over pseudo-ties threatens the vested rights of market participants under section 217 of the FPA.²⁸¹ We disagree. Even without a pseudo-tie, external generators are still able to sell energy into the PJM energy markets. However, without a pseudo-tie, generators that have historically been used to serve load in a different RTO (e.g., via a long term contract) would be unable to sell their capacity in the PJM capacity market. The load, therefore, would be required to purchase capacity through the PJM capacity market, despite having already contracted with a generator, albeit an external generator. The Commission has previously held in response to IMEA’s challenge to PJM’s Capacity Import Limits that section 217 does not apply to capacity markets.²⁸²

179. Regarding the additional self-supply arguments raised by IMEA, Brookfield, and NCEMC, in their respective protests, we agree that PJM has addressed these concerns

²⁸⁰ PJM Deficiency Response at 16-17.

²⁸¹ In the Final Order promulgating these regulations, the Commission described the intent of section 217 as ensuring that “long-term firm transmission rights must be made available with terms (and/or rights to renewal) that are sufficient to meet the reasonable needs of load serving entities to support long-term power supply arrangements used to satisfy their service obligations.” *Long-Term Firm Transmission Rights in Organized Electricity Markets*, Order No. 681, FERC Stats. & Regs. ¶ 31,226, at P 2, *reh’g denied*, Order No. 681-A, 117 FERC ¶ 61,201 (2006), *order on reh’g and clarification*, Order No. 681-B, 126 FERC ¶ 61,254 (2009).

²⁸² *PJM Interconnection, L.L.C.*, 150 FERC ¶ 61,041, at P 19 (2015) (“Section 217 applies to firm transmission rights or financial transmission rights. These rights apply in the energy market. Capacity markets, however, were established to ensure the long-term reliability and adequacy of the system and, therefore, different requirements may reasonably be applied to these markets.”).

with its proposed extended CIL Exception for self-supply. The exception for Prior CIL Exception Resources is designed to accommodate, not exclude these resources unless deliverability issues demand action to cure or otherwise address any deliverability deficit. PJM argues that, to this point, no operational deliverability issues have been identified that will affect sellers in the upcoming Delivery Year, and along the lines of the determinations at PP 135-138, *supra*, we agree that PJM's proposal to provide such sellers with an exception from the new requirements for the life of the resource's obligation addresses protesters' concerns.

180. Regarding the costs for transmission upgrades raised by Brookfield, we find that these concerns are beyond the scope of this proceeding. PJM did not file revisions that would change the nature of how costs are allocated for transmission upgrades – either internal or external to PJM. We therefore reject Brookfield's argument that PJM's proposal will cause external resources to pay for unlimited serial transmission upgrades due to a year-to-year change in PJM's deliverability standards.

10. Non-Performance Penalties

a. PJM's Filing

181. PJM proposes to modify the non-performance penalty provision for external Generation Capacity Resources beginning in the 2020/2021 Delivery Year to assess performance at sub-regional transmission organization granularity. PJM states that these revisions will assess performance based on how an external resource resolved a declared Emergency Action, rather than based on whether an Emergency Action has been declared for the entire PJM Region and subjects external resources to the same requirement as internal resources.²⁸³

b. Comments and Protests

182. AMP, NCEMC, IMEA, the Illinois AG, and the PJM IMM all protest PJM's revisions to the non-performance penalties arguing for additional clarity about the application of the penalties within PJM's Tariff. AMP states that the new standards would apply a more granular approach, but do not indicate how PJM would identify affected sub-regions risking inconsistent treatment from one event to the next.²⁸⁴ AMP argues that PJM's proposed test is not sufficiently rigorous or objective in determining whether a resource's performance would have had an effect on the conditions that made

²⁸³ PJM Transmittal at 20.

²⁸⁴ AMP First Protest at 15-16.

declaration of an Emergency Action necessary.²⁸⁵

183. NCEMC argues that the new language in section 5.5A(c)(i)(B) of the Tariff relieves a grandfathered Prior CIL Exception External Resource from its capacity obligation and from the non-performance penalty charges, and argues there are no similar provisions excusing a non-grandfathered external resource from capacity obligations or non-performance penalty charges. NCEMC argues that PJM has not provided justification for treating grandfathered and non-grandfathered pseudo-tied resources differently.²⁸⁶

184. IMEA explains that since PJM began modeling the ComEd Zone as its own LDA, capacity auction clearing prices between ComEd and the rest of RTO have separated widely. IMEA states that its generators are in the Ameren Illinois zone of MISO but are not allowed to sell into the ComEd LDA capacity auction. IMEA states that it must pay for capacity at the ComEd clearing price, but it only gets paid the rest of RTO clearing price, despite the separation over the last two capacity auctions.²⁸⁷ IMEA argues that if PJM's proposal to expand the scope of events for which penalties may be imposed on IMEA is accepted, then PJM should not be allowed to force all external generators to the rest of RTO for capacity auction clearing prices.²⁸⁸ IMEA requests that the Commission require PJM to develop an equitable solution to the replacement transaction issue.²⁸⁹

185. The Illinois AG share similar concerns as IMEA, noting that PJM models pseudo-tied capacity resources as available to the rest of RTO and not to the specific LDA where the resources enter the PJM system. The Illinois AG argues that this practice creates an anomalous effect of increased firm transmission services from MISO to PJM and reduced import capability.²⁹⁰ The Illinois AG explains that Capacity Emergency Transfer Limit (CETL) is a key planning parameter for each annual capacity auction, which determines how much energy each LDA may import during a localized capacity emergency.²⁹¹ The

²⁸⁵ *Id.* at 16.

²⁸⁶ NCEMC First Protest at 41-42.

²⁸⁷ IMEA First Protest at 37-39.

²⁸⁸ *Id.* at 39.

²⁸⁹ *Id.*

²⁹⁰ Illinois AG Comments at 6-8.

²⁹¹ *Id.* at 7. The Illinois AG notes the CETL for the ComEd zone for the 2018/2019 capacity auction was 5,227 MW compared to 7,020 MW for the 2017/2018

Illinois AG states that for the ComEd zone, pseudo-ties or firm transmission service reservations from the MISO region of Illinois to PJM are treated as if the associated capacity and energy were available equally throughout the PJM region. The Illinois AG argues that this treatment is fundamentally unfair to Illinois because exports within Illinois from MISO to PJM are not counted as available to satisfy Illinois's capacity needs in the ComEd zone.²⁹² The Illinois AG recommends the PJM IMM's proposal to assign pseudo-tied capacity to a local zone so that capacity can be treated like a local resource.²⁹³

186. The PJM IMM agrees that the external resources should pay non-performance penalty charges at the same locational level as internal resources. The PJM IMM explains that external resources are not linked to specific LDAs in the capacity auctions and do not meet the reliability needs of specific LDAs. The PJM IMM states that if an external 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.²⁹⁴

c. Answers

187. PJM clarifies that it is not planning to map pseudo-tied external resources to a specific LDA, however, for the purposes of operational assessment, PJM will assign the resource to a transmission zone based on the shortest Electrical Distance between the pseudo-tied resource and a transmission zone in PJM. PJM explains that the linking will be made known to the owner of the resource prior to the Delivery Year so they know which LDA they are in and whether they are experiencing a Performance Assessment Hour.²⁹⁵ PJM explains that if a Performance Assessment Hour is triggered for that PJM zone, the pseudo-tied resource will be expected to respond and will be eligible for Non-Performance Charges and Bonus payments.²⁹⁶

capacity auction.

²⁹² *Id.* at 8.

²⁹³ *Id.* at 10. See Monitoring Analytics, LLC, URMSTF (ECPE) Package D Proposal, Dec. 8, 2016, <http://pjm.com/~media/committees-groups/task-forces/urmstf/20161207/20161207-ecpe-package-d-executivesummary.ashx>.

²⁹⁴ PJM IMM Comments at 7-8.

²⁹⁵ PJM Deficiency Response at 23-24.

²⁹⁶ *Id.* at 23. PJM explains that communication would occur via phone call from

188. In response to IMEA, PJM states that, although it is true that external resources will receive an RTO-wide clearing price but be assigned non-performance charges based on the LDA in which the load resides, these differing clearing price and non-performance charge procedures are a deliberate feature of PJM's market design as accepted by the Commission in the Capacity Performance proceeding.²⁹⁷

d. Commission Determination

189. We find that PJM's proposal to apply non-performance penalties to external resources in a manner that is comparable to internal resources is just and reasonable. We find that the additional granularity to assess non-performance penalties at the sub-regional level and to assess performance on how the external resource was able to help resolve an Emergency Action is appropriate.

190. AMP argues that PJM's proposed test to determine whether a resource helped resolve an Emergency Action is not sufficiently rigorous or objective in determining whether a resource's performance would have had an effect on the conditions that made declaration of an Emergency Action necessary. We disagree. As PJM explains, if a Performance Assessment Hour is triggered for a particular PJM zone, which the pseudo-tied resource is mapped to, the pseudo-tied resource will be expected to respond and be eligible for Non-Performance Charges and Bonus payments.

191. NCEMC argues there are no similar provisions excusing a non-grandfathered external resource from capacity obligations or non-performance penalty charges and that PJM has not provided justification for treating these two groups differently. We reject NCEMC's argument that PJM needs to provide further justification for its non-performance penalties for grandfathered or non-grandfathered resources. PJM proposes to allow grandfathered resources to be released from their obligation, without penalty, in the event they do not meet the Operationally Deliverable standard, discussed in the previous section. In essence, the Operationally Deliverable standard ceases after a resource has reached the end of its transition period and we find that there would be no reason to treat the resource as grandfathered thereafter. We therefore reject NCEMC's argument.

192. IMEA and the Illinois AG, while not taking specific issue with PJM's proposed non-performance penalties, argue that PJM should assign pseudo-ties to the local zone so that capacity may be treated like a local resource. IMEA notes that capacity prices in the ComEd zone and the rest of RTO have separated over the years. IMEA argues that if

the PJM control room directly to the operator of the pseudo-tied resource.

²⁹⁷ PJM Third Answer at 4.

PJM's proposal to expand the scope of events for which penalties may be imposed on IMEA is accepted, then PJM should not be allowed to force all external generators to the rest of RTO for capacity auction clearing prices. We dismiss these arguments as beyond the scope of this proceeding. PJM's proposal, specifically for non-performance penalties, addresses the treatment of external resources, but does not focus or address issues related to PJM's general modeling for the PJM capacity auctions. To the extent that IMEA or the Illinois AG take issue with how PJM models capacity or capacity zones in its capacity auctions, we note that the stakeholder process is the appropriate place to do so.

193. The PJM IMM argues that PJM should map external resources to LDAs inside of PJM for the purposes of assessing non-performance penalties. PJM clarifies that it intends to assign the external resource to a transmission zone based on the shortest Electrical Distance between the pseudo-tied resource and a transmission zone in PJM and will make it known prior to the Delivery Year. We agree that, in order to better align external resources with internal resources, non-performance penalties should be on a more comparable footing. We therefore accept PJM's proposal, subject to condition, that PJM revise its Tariff to apply non-performance penalties at a sub-regional transmission granularity. PJM must revise its Tariff, in section 10A(c), to include the following clarification: "At the start of the Delivery Year, PJM will inform the Capacity Market Seller of an external resource as to which LDA it has been assigned." PJM must make this revision within 30 days of the date of this order.

11. Other Concerns

a. Comments and Protests

194. ITC Lake Erie requests clarification that the proposed rules do not contemplate or address capacity transactions into PJM conducted over HVDC systems.²⁹⁸ ITC Lake Erie argues that the issues that PJM's proposal identifies related to managing AC systems, did not consider HVDC systems as part of those challenges. ITC Lake Erie suggests that the operating characteristics of HVDC facilities, such as the Lake Erie Connector, may mitigate or eliminate the challenges the PJM has identified. Given these unique characteristics, ITC Lake Erie states that it would expect that one or more filings with the

²⁹⁸ ITC Lake Erie Comments at 3-4. ITC Lake Erie explains that the Lake Erie Connector is a 72 mile HVDC transmission line and Voltage Source Converter stations of 1,000 MW running from Ontario to Pennsylvania and will be the first direct connect between PJM and the Independent Electric System Operator of Ontario. ITC Lake Erie explains that injections over the Lake Erie Connector from Ontario to PJM would not utilize existing AC interties and would create incremental transfer capability. ITC Lake Erie states that the Lake Erie Connector is expected to get final approval by mid-2017.

Commission would be necessary to support the coordination and operation of the Lake Erie Project, since this type of project should be governed by agreements and market protocols that recognize the operational features of HVDC. ITC Lake Erie states that if

the Commission accepts PJM's proposal, it should clarify and determine that the changes would not apply to PJM capacity imports over HVDC facilities.²⁹⁹

b. Commission Determination

195. ITC Lake Erie requests clarification that the requirements in the instant filing do not apply to capacity imports over HVDC systems. We disagree and clarify that the same criterion for external generators applies to imports such as transactions over HVDC systems. PJM's filing did not stipulate any exception to the requirements proposed in the instant filing or create separate requirements for HVDC versus AC systems. However, we note that, since the Lake Erie Connector is a high-voltage project, it requires extensive amounts of interconnection studies and a service agreement with PJM, much like the interconnection studies and interconnection service agreements that internal generators in PJM are required to have. With respect to the visibility that PJM has over the facility and the number of interconnection studies that have been completed, PJM may treat the Lake Erie Project in a way that is more akin to an internal generator. As such, we would not expect that an HVDC transmission line that meets all of PJM's proposed requirements at the time of interconnection would be subject to many of the concerns that PJM has with external resources for which PJM did not approve of the interconnection study with the native Balancing Authority.

12. MISO Request for Technical Conference

196. MISO filed a motion proposing that a staff led technical conference would help advance the development of solutions on many of the pseudo-tie issues pending before the Commission. MISO proposes that a technical conference on pseudo-ties would thematically focus on reliability, markets, and efficiencies, with an agenda that might include topics such as the purpose of pseudo-ties and their advantages over fixed or dynamic schedules; possible resolutions to specific challenges associated with pseudo-ties such as Firm Flow Entitlements and methods of making units whole that are dispatched to support the native Balancing Authority's local transmission system; and the level and nature of coordination required between neighboring RTOs.³⁰⁰

a. Comments

197. AMP, NIMPA, and PJM all filed responsive pleadings to MISO's suggested technical conference. AMP states that is not opposed to MISO's request for a technical conference and requests the opportunity to participate in any technical conference

²⁹⁹ *Id.* at 5-8.

³⁰⁰ MISO Comments at 7-8.

established.³⁰¹ AMP and NIMPA request that any issues related to the double congestion charges in other pending dockets not be included in the technical conference, as AMP believes that including these issues could cause a needless delay in the resolution of those complaints.³⁰²

198. AMP and NIMPA agree with MISO that the technical conference discussion need not and should not proceed from the premise that pseudo-ties are the only viable way to accommodate capacity and energy transactions between the RTO regions. AMP and NIMPA argue that there is no reason to limit the technical conference discussion to issues intrinsic to pseudo-ties if less burdensome alternatives exist.³⁰³

199. PJM and MISO request that the Commission convene a technical conference only after PJM and MISO have submitted amendments to the RTOs Joint Operating Agreement, which they are actively preparing, related to coordination and implementation of a *pro forma* pseudo-tie agreement and a prospective solution to address congestion overlap between the two RTOs. PJM and MISO state that holding a technical conference before the RTOs submit the amendments they are working on may not be productive at the present time.³⁰⁴

b. Commission Determination

200. We decline the request for a technical conference and instead find that the instant proceeding does not require a technical conference. We agree with MISO and PJM that, given the number of pending proceedings related to pseudo-ties, holding a technical conference at this time would not be productive to resolving the numerous issues pending before the Commission.

The Commission orders:

(A) PJM's proposed Tariff and Operating Agreement revisions are hereby accepted, as discussed in the body of this order, to become effective May 9, 2017.

³⁰¹ AMP Answer at 2; NIMPA Answer at 2.

³⁰² AMP Answer at 2; NIMPA Answer at 2.

³⁰³ AMP First Answer at 3, referencing the pending Potomac Complaint in Docket No. EL17-62.

³⁰⁴ PJM and MISO Joint Answer at 1-2.

(B) PJM is hereby directed to submit a compliance filing within 30 days of the date of this order, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

Appendix A

Tariff Records Accepted PJM Interconnection, L.L.C. Intra-PJM Tariffs

[OATT Definitions – E - F, 12.0.0](#)

[OATT Definitions – L – M - N, 13.0.0](#)

[OATT Definitions – O – P - Q, 16.0.0](#)

[OATT ATTACHMENT DD.5.5A Capacity Resource Types, 2.0.1](#)

[OATT ATTACHMENT DD.10A CHARGES FOR NON-PERFORMANCE AND CREDI, 2.0.1](#)

[RAA ARTICLE 1 -- DEFINITIONS, 20.0.1](#)

[RAA SCHEDULE 10, 3.0.0](#)

Appendix B
List of Intervenors

Advanced Energy Economy
American Electric Power Service Corporation
American Municipal Power, Inc.
American Wind Energy Association
Brookfield Energy Marketing LP
Buckeye Power, Inc.
Cogentrix Energy Power Management, LLC
Duke Energy Corporation
Dynergy Marketing and Trade, LLC and Illinois Power Marketing Company
East Kentucky Power Cooperative, Inc.
Entergy Services, Inc.
Exelon Corporation
FirstEnergy Service Co.
Illinois Municipal Electric Agency
Illinois Attorney General and the People of the State of Illinois
Independent Market Monitor for PJM
ITC Lake Erie Connector LLC
LS Power Associates
Midcontinent Independent System Operator, Inc.
New York State Public Service Commission
New York Transmission Owners
North Carolina Electric Membership Corporation
NRG Power Marketing, LLC and GenOn Energy Management, LLC
Old Dominion Electric Cooperative
Organization of MISO States
Organization of PJM States, Inc.
PJM Power Providers Group
Potomac Economic, Ltd.
Southern Company Services
Tatanka Wind Power, LLC
Tilton Energy, LLC
Wabash Valley Power Association
Wisconsin Electric Power Co.

Motions to Intervene Out-of-Time

Arkansas Public Service Commission
Dayton Power and Light Co.
Electric Power Supply Association
Illinois Commerce Commission

Independent Power Producers of New York, Inc.
Mississippi Public Service Commission
New York Independent System Operator, Inc.
Northern Illinois Municipal Power Agency