

195 FERC ¶ 61,031
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Laura V. Swett, Chairman;
David Rosner, Lindsay S. See,
Judy W. Chang, and David LaCerte.

PJM Interconnection, L.L.C.

Docket No. ER24-2045-004

ORDER ACCEPTING COMPLIANCE IN PART AND DIRECTING FURTHER
COMPLIANCE

(Issued April 16, 2026)

1. On October 23, 2025, PJM Interconnection, L.L.C. (PJM) submitted proposed revisions to its Open Access Transmission Tariff (Tariff) in compliance with the requirements of Order Nos. 2023 and 2023-A¹ and the Commission's order on compliance issued on July 24, 2025 (Second Compliance Filing).² As discussed below, we find that PJM's Second Compliance Filing partially complies with the requirements of Order Nos. 2023 and 2023-A and with the Commission's directives in the First Compliance Order. Accordingly, we accept in part and reject in part PJM's Second Compliance Filing, to become effective as of the commencement date of the next Cycle,³ and direct PJM to submit further compliance filings.⁴

¹ *Improvements to Generator Interconnection Procs. & Agreements*, Order No. 2023, 184 FERC ¶ 61,054, *order on reh'g*, 185 FERC ¶ 61,063 (2023), *order on reh'g*, Order No. 2023-A, 186 FERC ¶ 61,199, *errata notice*, 188 FERC ¶ 61,134 (2024).

² *PJM Interconnection, L.L.C.*, 192 FERC ¶ 61,077 (2025) (First Compliance Order).

³ PJM refers to its first-ready, first-served cluster study process as a "Cycle." PJM's Tariff defines a Cycle as "that period of time between the start of an Application phase and conclusion of the corresponding Final Agreement Negotiation Phase. The Cycle consists of the Application Phase, Phase I, Decision Point I, Phase II, Decision Point II, Phase III, Decision Point III, and the Final Agreement Negotiation Phase." PJM Interconnection, L.L.C., Intra-PJM Tariffs, pt. VIII, subpt. A, § 400C (Definitions C) (1.0.0) (PJM Tariff).

⁴ See Appendix for tariff records accepted and rejected in this order.

I. Background

2. Order Nos. 2023 and 2023-A amended the Commission's *pro forma* Large Generator Interconnection Procedures (LGIP), *pro forma* Large Generator Interconnection Agreement (LGIA), *pro forma* Small Generator Interconnection Procedures (SGIP), and *pro forma* Small Generator Interconnection Agreement (SGIA).⁵ Order No. 2023 requires all public utility transmission providers to adopt revised *pro forma* LGIPs, *pro forma* LGIAs, *pro forma* SGIPs, and *pro forma* SGIAs. These revisions ensure that interconnection customers are able to interconnect to the transmission system in a reliable, efficient, transparent, and timely manner, and will prevent undue discrimination.⁶ In Order No. 2023, the Commission adopted a comprehensive package of reforms in three general categories: (1) reforms to implement a first-ready, first-served cluster study process; (2) reforms to increase the speed of interconnection queue processing; and (3) reforms to incorporate technological advancements into the interconnection process.

3. On May 16, 2024, and October 29, 2024, in Docket Nos. ER24-2045-000 and ER24-2045-002, PJM submitted its compliance filing and response to Commission staff's data request in compliance with Order Nos. 2023 and 2023-A (together, Initial Compliance Filing). In the First Compliance Order, the Commission found that PJM's Initial Compliance Filing partially complied with the requirements of Order Nos. 2023 and 2023-A. Accordingly, the Commission accepted PJM's Initial Compliance Filing in part and directed PJM to submit a further compliance filing within 60 days of the issuance of the First Compliance Order. Specifically, the Commission directed revisions to PJM's Tariff to comply with the following requirements of Order Nos. 2023 and 2023-A: public interconnection information, cluster study process, allocation of cluster study costs, allocation of cluster network upgrade costs, site control, elimination of reasonable efforts, affected system study process and modeling requirements, affected system *pro forma* agreements, co-located generating facilities, availability of surplus interconnection service, operating assumptions for interconnection customers, incorporating the

⁵ The *pro forma* LGIP and *pro forma* LGIA establish the terms and conditions under which public utilities that own, control, or operate facilities for transmitting energy in interstate commerce must provide interconnection service to generating facilities larger than 20 MW. The *pro forma* SGIP and *pro forma* SGIA establish the terms and conditions under which public utilities that own, control, or operate facilities for transmitting energy in interstate commerce must provide interconnection service to generating facilities no larger than 20 MW. Order No. 2023, 184 FERC ¶ 61,054 at P 2.

⁶ First Compliance Order, 192 FERC ¶ 61,077 at P 1.

enumerated alternative transmission technologies, modeling and ride-through requirements, and errata requirements.⁷

II. Second Compliance Filing

4. PJM states that it proposes Tariff revisions in this Second Compliance Filing to address the directives in the First Compliance Order and to provide further justifications for its requested independent entity variations.⁸ PJM requests a flexible effective date for the proposed Tariff revisions, as discussed further in section IV.B.15.

III. Notice of Filing and Responsive Pleadings

5. Notice of PJM's Second Compliance Filing was issued on October 23, 2025, with interventions and protests due on or before November 13, 2025. Timely motions to intervene and protests were filed by: Shell Energy North America (US) L.P, Shell New Energies US, LLC, and Savion, LLC (collectively, Shell Companies); Invenergy Wind Development North America LLC (Invenergy); Sierra Club and Natural Resources Defense Council Project; and Clean Energy Associations.⁹

6. On December 5, 2025, PJM filed an answer to Invenergy's protest. On December 22, 2025, Invenergy and Shell Companies filed separate answers to PJM's answer.

IV. Discussion

A. Procedural Matters

7. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2025), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

8. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2025), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. We accept the answers filed by PJM, Invenergy, and

⁷ *Id.* PP 32, 48, 49, 80, 92, 109, 116, 121, 132, 163, 165, 222, 263, 264, 270, 284, 293, 308, 327, 328, 329.

⁸ Second Compliance Filing at 2.

⁹ Clean Energy Associations refers to American Clean Power Association, Advanced Energy United, and Solar Energy Industries Association.

Shell Companies in this proceeding because they have provided information that assisted us in our decision-making process.

B. Substantive Matters

9. As discussed below, we find that PJM's Second Compliance Filing partially complies with the directives in the First Compliance Order and the requirements of Order Nos. 2023 and 2023-A. Accordingly, we accept in part and reject in part PJM's Second Compliance Filing, to become effective as of the commencement date of the next Cycle, and direct PJM to submit further compliance filings.

1. Proposed Variations

10. As discussed further below, PJM has proposed certain variations from the Commission's requirements in Order Nos. 2023 and 2023-A. The Commission explained in Order No. 2023 that such variations would be reviewed under the same standard allowed by Order Nos. 2003, 2006, and 845.¹⁰ In Order No. 2003, when adopting the *pro forma* LGIP and *pro forma* LGIA, the Commission permitted Regional Transmission Organizations/Independent System Operators (RTO/ISO) to seek "independent entity variations" for pricing and non-pricing provisions, and stated that RTOs/ISOs "shall have greater flexibility to customize [their] interconnection procedures and agreement to fit regional needs."¹¹ The Commission stated that this approach recognizes that an RTO/ISO is less likely to act in an unduly discriminatory manner than a transmission provider that is a market participant.¹² The Commission has granted independent entity variations from interconnection-related rulemakings where the RTO/ISO demonstrates that the proposed variation: (1) is just and reasonable and not unduly discriminatory or

¹⁰ Order No. 2023, 184 FERC ¶ 61,054 at P 1764 (citing *Standardization of Generator Interconnection Agreements & Procs.*, Order No. 2003, 104 FERC ¶ 61,103, at P 826 (2003), *order on reh'g*, Order No. 2003-A, 106 FERC ¶ 61,220, *order on reh'g*, Order No. 2003-B, 109 FERC ¶ 61,287 (2004), *order on reh'g*, Order No. 2003-C, 111 FERC ¶ 61,401 (2005), *aff'd sub nom. Nat'l Ass'n of Regul. Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007); *Standardization of Small Generator Interconnection Agreements & Procs.*, Order No. 2006, 111 FERC ¶ 61,220, at PP 447, 549, *order on reh'g*, Order No. 2006-A, 113 FERC ¶ 61,195 (2005), *order granting clarification*, Order No. 2006-B, 116 FERC ¶ 61,046 (2006); see *Reform of Generator Interconnection Procs. & Agreements*, Order No. 845, 163 FERC ¶ 61,043, at P 556 (2018), *order on reh'g*, Order No. 845-A, 166 FERC ¶ 61,137, *order on reh'g*, Order No. 845-B, 168 FERC ¶ 61,092 (2019)).

¹¹ Order No. 2003, 104 FERC ¶ 61,103 at P 826.

¹² *Id.* P 827.

preferential; and (2) accomplishes the purposes of the order.¹³ It is not a sufficient justification to state that a variation conforms to current RTO/ISO practices or to the RTO's/ISO's tariff definitions and terminology.¹⁴ Even if the transmission provider is an RTO/ISO, it must still justify its variations in light of the Commission's *pro forma* LGIP and/or *pro forma* LGIA and/or *pro forma* SGIP and/or *pro forma* SGIA.¹⁵ We evaluate PJM's proposed variations from the requirements of Order Nos. 2023 and 2023-A accordingly.

2. Public Interconnection Information

11. In Order No. 2023, the Commission adopted section 6.1 (Publicly Posted Interconnection Information)¹⁶ of the *pro forma* LGIP to require transmission providers to maintain and make publicly available an interactive visual representation of available interconnection capacity (commonly known as a "heatmap") as well as a table of relevant interconnection metrics that is produced in response to user-specified input about each prospective generating facility.¹⁷ The table will allow prospective interconnection customers to see certain estimates of a potential generating facility's effect on the transmission provider's transmission system. The Commission required transmission providers to update their heatmaps within 30 calendar days after the completion of each cluster study and cluster restudy. Further, the Commission clarified that transmission providers are not required to make their heatmaps available until after their transition periods.

¹³ See, e.g., *ISO New Eng. Inc.*, 164 FERC ¶ 61,222, at P 9 (2018) (citing Order No. 2003, 104 FERC ¶ 61,103 at PP 26, 827; *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,247, at P 20 (2016); *Cal. Indep. Sys. Operator Corp.*, 140 FERC ¶ 61,070, at P 44 (2012)).

¹⁴ See *Cal. Indep. Sys. Operator Corp.*, 170 FERC ¶ 61,112, at P 11 (2020); *Sw. Power Pool, Inc.*, 170 FERC ¶ 61,042, at P 14 (2020); *ISO New Eng. Inc.*, 170 FERC ¶ 61,209, at P 14 (2020); *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,221, at P 18 (2019); *PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,226, at P 15 (2019).

¹⁵ See *PJM Interconnection, L.L.C.*, 108 FERC ¶ 61,025, at P 16 (2004).

¹⁶ We note that the section or article title appears in parentheses following the first usage of that section or article in this order.

¹⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 135; see also *pro forma* LGIP § 6.1.

a. First Compliance Order

12. In the First Compliance Order, the Commission granted PJM's requested independent entity variation to use its Queue Scope tool in lieu of an interactive heatmap of publicly available interconnection information.¹⁸ However, the Commission stated that PJM did not explain in its filing that its existing Tariff references the Queue Scope tool or details when, and how, the Queue Scope tool is updated. The Commission stated that PJM does not explain how its proposal to update the Queue Scope tool on a routine basis as Phases I and II of each Cycle are completed complies with the requirement in Order No. 2023 that heatmaps be updated within 30 calendar days of the completion of the cluster study and cluster restudy. The Commission directed PJM to submit a further compliance filing that proposes Tariff revisions to incorporate the required public interconnection information requirements into the Tariff (i.e., the Queue Scope tool), including how the Queue Scope tool is updated.¹⁹

b. Second Compliance Filing

13. PJM proposes revisions to add Tariff, Part VIII, Subpart A, new section 401(H), which describes the Queue Scope tool, its availability, and its use by interconnection customers to assess the viability of a potential location and configuration by screening potential points of interconnection and assessing grid impacts based on a given amount of MW injection or withdrawal at a given point of interconnection.²⁰ PJM states that its proposed Tariff section 401(H) also specifies that PJM will update the Queue Scope tool with the latest, refined base case data available (i.e., the base case data for the next Phase II or Phase III in the current Cycle), within 30 days of such data being developed and posted by PJM.²¹ PJM argues that by using base case data for Phases II and III, but not for Phase I, it will be populating the Queue Scope tool with data that is most representative of future system conditions. PJM explains that based on its experience, it expects the withdrawal of projects at the end of Phase I of each Cycle to be significant, making the Phase I base case data less reflective of future conditions. PJM asserts that although its proposed timing is different from the timing specified in the final rule, PJM will be providing through the Queue Scope tool the most up-to-date information within 30 days of its development and posting.

¹⁸ First Compliance Order, 192 FERC ¶ 61,077 at P 31.

¹⁹ *Id.* P 32.

²⁰ Second Compliance Filing at 5; PJM Tariff, pt. VIII, subpt. A, § 401 (3.0.0), § 401(H).

²¹ Second Compliance Filing at 5-7.

c. Commission Determination

14. We find that PJM's proposed revisions concerning public interconnection information are just and reasonable and not unduly discriminatory or preferential and accomplish the purposes of Order Nos. 2023 and 2023-A because PJM's proposed revisions explain how PJM's Queue Scope tool provides sufficient transparency to prospective interconnection customers about potential points of interconnection and allows them to assess expected congestion, likely network upgrades, and the viability of a proposed generating facility before submitting an interconnection request.²² In the First Compliance Order, the Commission directed PJM to file tariff revisions that sufficiently explain and detail how it will use the Queue Scope tool. We find that the proposed revisions comply with this directive of the First Compliance Order because PJM has detailed in the Tariff how Queue Scope tool complies with Order No. 2023's public interconnection information requirements, including how the Queue Scope tool is updated. As PJM explains, its proposed Tariff revisions describe the Queue Scope tool; its availability; and its use by interconnection customers, in conjunction with the planning models PJM makes publicly available and the study reports available on PJM's website, to assess the viability of a potential interconnection location and configuration by screening potential points of interconnection and assessing grid impacts based on a given amount of MW injection or withdrawal at a given point of interconnection.²³

15. We grant PJM's requested independent entity variation to clarify that Queue Scope tool will be updated with the base case data for Phase II and III within 30 calendar days of such data being developed, as opposed to 30 calendar days after the completion of the cluster study and restudy. Specifically, we find that PJM's proposed independent entity variation is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A because PJM's timeline for updating the Queue Scope tool data provides a means for interconnection customers to obtain additional information prior to entering the interconnection queue. PJM's proposed cluster study process, which the Commission accepted in the First Compliance Order, varies from the Commission's *pro forma* cluster study process and does not include a cluster restudy.²⁴ PJM's timeline for updating the Queue Scope tool data aligns with the

²² See Order No. 2023, 184 FERC ¶ 61,054 at PP 136-137 (describing the purpose of the public interconnection information requirements).

²³ Second Compliance Filing at 6.

²⁴ First Compliance Order, 192 FERC ¶ 61,077 at P 66. In PJM's cluster study process, PJM's 180-day application period opens at the beginning of Phase II of the prior Cycle and runs concurrently with the prior Cycle. See First Compliance Order, 192 FERC ¶ 61,077 at P 45.

conclusion of the Phase I and Phase II System Impact Studies in the PJM process and as PJM explains, provides interconnection customers with the most up-to-date information available.²⁵

3. Cluster Study Process

16. In Order No. 2023, the Commission revised the *pro forma* LGIP and *pro forma* LGIA to require transmission providers to study interconnection requests in clusters. The Commission added several new, and revised several existing, defined terms to facilitate this change.²⁶

a. First Compliance Order

17. In the First Compliance Order, the Commission partially accepted PJM's Tariff provisions concerning the cluster study process. The Commission granted PJM's requested independent entity variation to retain its existing clustered Cycle process, finding that it accomplishes the purposes of Order No. 2023's cluster study reforms, which make cluster studies the required interconnection study method.²⁷ The Commission also directed PJM to submit a further compliance filing to comply with several of the cluster study process requirements of Order No. 2023.

b. Commission Determination

18. We find that PJM's proposed revisions in its Second Compliance Filing partially comply with the cluster study process requirements in Order Nos. 2023 and 2023-A. We address specific aspects of PJM's proposed cluster study process below.

c. Application Window and Process

19. The Commission adopted section 3.4.1 (Cluster Request Window), section 3.4.4 (Deficiencies in Interconnection Request), and section 3.4.5 (Customer Engagement Window) of the *pro forma* LGIP to provide a process for interconnection customers to submit a cluster study interconnection request.²⁸

²⁵ Second Compliance Filing at 6.

²⁶ Order No. 2023, 184 FERC ¶ 61,054; *see also pro forma* LGIP § 1; *pro forma* LGIA art. 1.

²⁷ First Compliance Order, 192 FERC ¶ 61,077 at P 45.

²⁸ Order No. 2023, 184 FERC ¶ 61,054 at P 223; *see also pro forma* LGIP §§ 3.4.1,

20. The Commission revised *pro forma* LGIP section 7.1 (Cluster Study Agreement) to provide that the transmission provider must tender to each interconnection customer that submitted a valid interconnection request a cluster study agreement no later than five business days after the close of the cluster request window.²⁹ The Commission revised *pro forma* LGIP section 7.2 (Execution of Cluster Study Agreement) to provide that, if the interconnection customer does not provide technical data when it delivers the cluster study agreement, the transmission provider must notify the interconnection customer of the deficiency within five business days, and the interconnection customer must cure the deficiency within 10 business days.³⁰

i. First Compliance Order

21. In the First Commission Order, the Commission granted PJM's requested independent entity variation to retain its existing Tariff's 180-day notice period for submitting an interconnection request for a Cycle and 90-day period for PJM to review the interconnection requests.³¹ The Commission also accepted PJM's proposal to maintain its existing requirement for interconnection customers to correct identified deficiencies within 10 business days.³² The Commission also granted PJM's requested independent entity variation to not commence the cluster study on an annual basis and instead to gate each Cycle off from successive Cycles, and PJM's proposal to provide notice of the application deadline for a new Cycle at the beginning of Phase II of the prior Cycle.³³

22. However, the Commission rejected PJM's proposal to maintain its existing process to use "reasonable efforts" to inform interconnection customers of any deficiencies in their interconnection requests within 15 business days after the application deadline.³⁴ First, the Commission found that PJM failed to satisfy the requirements for an independent entity variation for its different timeline and for waiting until after the application deadline to notify interconnection customers of deficiencies in their interconnection requests

3.4.4, 3.4.5.

²⁹ Order No. 2023, 184 FERC ¶ 61,054 at P 317; *see also pro forma* LGIP § 7.1.

³⁰ Order No. 2023, 184 FERC ¶ 61,054 at P 317; *see also pro forma* LGIP § 7.2.

³¹ First Compliance Order, 192 FERC ¶ 61,077 at P 45.

³² *Id.* P 46.

³³ *Id.* P 50.

³⁴ *Id.* PP 47-48.

because PJM had not explained how these provisions accomplish the purposes of Order Nos. 2023 and 2023-A.³⁵ Second, the Commission rejected the use of the reasonable efforts standard, noting that the *pro forma* LGIP does not allow transmission providers to apply the reasonable efforts standard in their efforts to validate interconnection requests.³⁶ The Commission directed PJM to submit further compliance to: (1) remove the phrase “use reasonable efforts to” from section 403(B)(1)(c); and (2) either adopt the proposed length of time and point of notification in *pro forma* LGIP section 7.2 for informing interconnection customers of any deficiencies or justify the initial compliance proposal under the independent entity variation standard.

23. The Commission further found that PJM did not demonstrate how its proposal to retain its existing Tariff’s application review period complies with Order No. 2023’s requirement that transmission providers post new cluster information on OASIS with details of each interconnection request for that cluster, including information on the amount of interconnection service and the location of the proposed generating facility, within the first 10 business days of the customer engagement window.³⁷ The Commission directed PJM to submit a further compliance filing to explain how PJM proposes to comply with the requirement in section 3.4.5 of the *pro forma* LGIP for the transmission provider to post new cluster information within 10 business days of the opening of the customer engagement window, or justify its proposal under the independent entity variation standard.

ii. Second Compliance Filing

24. PJM proposes to remove the “reasonable efforts” language from its Tariff, Part VIII, Subpart B, section 403(B)(1)(c) and proposes that this revision be effective for the third Cycle after the Commission establishes an effective date for this filing. However, PJM requests an independent entity variation to retain its existing timeline specifying that it will inform an interconnection customer of any deficiencies within 15 business days after the application deadline.³⁸ PJM argues that its proposed timeline accomplishes the purpose of Order Nos. 2023 and 2023-A because its Tariff provides clarity as to each party’s obligations and expectations within the Commission-approved

³⁵ *Id.* P 47.

³⁶ *Id.* P 48.

³⁷ *Id.* P 49.

³⁸ Second Compliance Filing at 8-9; *see also* PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0).

90-day application review period, and will not delay completion of the interconnection process.³⁹

25. PJM requests an independent entity variation to permit PJM to post new Cycle information on its website 30 days prior to the end of the application review period because its Commission-approved cluster study process does not include a customer engagement window but does provide for a 90-day application review period.⁴⁰ PJM explains that it proposes to post the new Cycle information once all applications have been reviewed and accepted and PJM has developed the base case data for the Phase I system impact study, which will occur 30 days before the start of Phase I. PJM asserts that although its proposal departs from the *pro forma* LGIP, its proposal aligns with the Commission-approved application and review periods of PJM's current Cycle process and provides interconnection customers ample time to consider relevant data before proceeding to Phase I. PJM asserts that its requested independent entity variation is just and reasonable and "consistent with the Final Rule's objective of providing customers with data to make informed decisions as early as possible."⁴¹

iii. Commission Determination

26. We accept PJM's proposed Tariff revisions to remove the "reasonable efforts" language from section 403(B)(1)(c), which is consistent with the Commission's directive to remove such language.⁴²

27. We grant PJM's requested independent entity variation to retain its existing timeline specifying that it will inform an interconnection customer of any deficiencies in its interconnection request within 15 business days after the application deadline. We find that PJM's proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A. As PJM explains, its Commission-approved cluster study process does not include a customer engagement window but does provide for a 90-day application review period, which starts immediately after the application deadline.⁴³ PJM's proposed timeline for informing an interconnection customer of any deficiencies in its interconnection request,

³⁹ Second Compliance Filing at 8-9.

⁴⁰ *Id.* at 10-11.

⁴¹ *Id.* at 11 (citing Order No. 2023, 184 FERC ¶ 61,054 at PP 137, 232, 398).

⁴² First Compliance Order, 192 FERC ¶ 61,077 at P 48.

⁴³ Second Compliance Filing at 10-11; *see also* PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0), § 403(B).

which occurs during the application review period, is similar to the Commission's *pro forma* LGIP timeline for transmission providers to notify interconnection customers of any deficiencies within 5 business days of receiving the executed cluster study agreements, which occurs no later than the close of the customer engagement window.⁴⁴ We find that PJM's proposed timeline for informing interconnection customers of any deficiencies in their interconnection request accomplishes the purposes of Order Nos. 2023 and 2023-A because, as PJM explains, its proposal provides clarity as to each party's obligations and expectations within the 90-day application review period and will not delay the interconnection process.⁴⁵ As to PJM's proposed effective date of these revisions, we address those issues in section IV.B.15 below.

28. We grant PJM's requested independent entity variation related to posting new cluster information because we find that PJM's proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A. As PJM explains although its proposal to post new Cycle information 30 days prior to the end of the 90-day application review period departs from the *pro forma* LGIP, PJM's proposal to post the new Cycle information once PJM has developed the base case data for the Phase I system impact study provides ample time for interconnection customers to consider relevant data before proceeding to Phase I.⁴⁶ We find that PJM's proposed timeline for posting new Cycle information accomplishes the purpose of Order No. 2023 to provide interconnection customers with new cluster information as early as possible in the customer engagement window, such that they are able to make informed choices moving forward with their interconnection requests.⁴⁷

d. Scoping Meetings

29. The Commission adopted section 3.4.6 (Cluster Study Scoping Meetings) of the *pro forma* LGIP to require transmission providers to hold a scoping meeting with interconnection customers in the cluster.⁴⁸

⁴⁴ See *pro forma* LGIP § 3.4.5; see also *pro forma* LGIP § 7.2 (requiring the cluster study agreement be executed no later than the close of the customer engagement window).

⁴⁵ Second Compliance Filing at 8-9.

⁴⁶ Second Compliance Filing at 11 (citing Order No. 2023, 184 FERC ¶ 61,054 at P 232).

⁴⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 232.

⁴⁸ *Id.* P 245; see also *pro forma* LGIP § 3.4.6.

i. First Compliance Order

30. The Commission partially granted PJM's requested independent entity variation to retain its existing scoping meeting process.⁴⁹ Specifically, the Commission granted PJM's proposal to hold scoping meetings for projects in each transmission owner zone and to apply its existing Tariff's confidentiality provisions in lieu of non-disclosure agreements.⁵⁰ However, the Commission found that PJM's proposal to allow scoping meetings to be unilaterally waived by transmission owners was not just and reasonable and does not accomplish the purposes of Order No. 2023, and found that PJM's Tariff language stating that PJM "may" hold scoping meetings does not comply with the requirements of Order No. 2023. Accordingly, the Commission directed PJM to submit a further compliance filing with Tariff revisions to remove the provisions that permit transmission owners to waive scoping meetings and to require PJM to hold scoping meetings.⁵¹

ii. Second Compliance Filing

31. PJM proposes revisions to its Tariff, Part VIII, Subpart B, section 403(C)(1) to remove provisions allowing transmission owners to unilaterally waive scoping meetings and to state that PJM "will" hold scoping meetings.⁵² However, PJM requests an independent entity variation to permit scoping meetings to be waived in the event PJM, the interconnection customer, and the transmission owner all agree to waive the meeting. PJM asserts that there are certain situations, such as an interconnection request to expand an existing generating facility, when all parties are already familiar with the issues raised in the scoping meeting and allowing the scoping meeting to be waived would further the Commission's goals of efficiency and expedience.

iii. Commission Determination

32. We accept PJM's proposed Tariff revisions regarding scoping meetings because they comply with the Commission's directives in the First Compliance Order and grant PJM's requested independent entity variation. We find that PJM's proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A because it provides flexibility to waive the scoping

⁴⁹ First Compliance Order, 192 FERC ¶ 61,077 at P 77.

⁵⁰ *Id.* PP 78-79.

⁵¹ *Id.* P 80.

⁵² Second Compliance Filing at 9; PJM Tariff, pt. VIII, subpt. B § 403 (2.0.0), § 403(C)(1).

meeting only in the event all parties agree. We agree with PJM that, in the event all parties agree that a scoping meeting is unnecessary, allowing them to waive the scoping meeting would increase the efficiency of the interconnection process.⁵³

e. Commercial Operation Date Extension

33. The Commission revised section 4.4.5 of the *pro forma* LGIP to require that an interconnection customer receive an extension of fewer than three cumulative years of the generating facility's commercial operation date without requiring it to request such an extension from the transmission provider.⁵⁴ Specifically, the Commission clarified that (1) the commercial operation date reflected in the initial interconnection request shall be used in calculating the permissible fewer than three-year extension until the interconnection customer executes, or requests the unexecuted filing of, an LGIA, but (2) once the interconnection customer has executed an LGIA or requested that the LGIA be filed unexecuted, the commercial operation date established in the LGIA shall be the date from which the up to three cumulative years is calculated.

i. First Compliance Order

34. The Commission granted PJM's requested independent entity variation to retain its existing commercial operation date extension process after an interconnection customer has executed a Generation Interconnection Agreement (GIA) or requested that the GIA be filed unexecuted.⁵⁵ The Commission found, however, that PJM did not address how it complies with the requirement in section 4.4.5 of the *pro forma* LGIP that permits extension of the commercial operation date set forth in the initial interconnection request before the interconnection customer executes, or requests the unexecuted filing of, an LGIA. Accordingly, the Commission directed PJM to submit a further compliance filing to explain how PJM proposes to comply with the requirement in section 4.4.5 of the *pro forma* LGIP for the commercial operation date in the initial interconnection request to be used in calculating the permissible extension of the commercial operation date until the interconnection customer executes, or requests the unexecuted filing of, an LGIA, or justify its proposal under the independent entity variation standard.⁵⁶

⁵³ See Order No. 2023, 184 FERC ¶ 61,054 at P 3 (adopting reforms “to ensure that interconnection customers are able to interconnect to the transmission system in a reliable, efficient, transparent, and timely manner”).

⁵⁴ *Id.* P 293; see also *pro forma* LGIP § 4.4.5.

⁵⁵ First Compliance Order, 192 FERC ¶ 61,077 at P 93.

⁵⁶ *Id.* P 92.

ii. Second Compliance Filing

35. PJM requests an independent entity variation for its Tariff to impose no restrictions on interconnection customer changes to their projects' commercial operation dates before the Final Agreement Negotiation Phase. PJM explains that it does not consider generating facilities' commercial operation dates submitted as part of an interconnection request application prior to the development of milestone dates and the negotiation of service agreements for the Cycle. PJM states that providing this flexibility for project developers is consistent with the objectives of Order No. 2023.⁵⁷

iii. Protest

36. Shell Companies argue that PJM's proposal to "impose no restrictions on[] Project Developer changes to their projects' commercial operation dates before the [Final LGIA Negotiation phase]" appears to limit commercial operation date extensions to before the start of the of the Final Agreement Negotiation Phase and is contrary to Order No. 2023, which allows for commercial operation date extensions both before and after the negotiation of the LGIA.⁵⁸ Shell Companies ask that the Commission reject PJM's requested independent entity variation and direct PJM to revise its Tariff to expressly specify that interconnection customers may make commercial operation date extensions during and through the end of the Final Agreement Negotiation Phase.⁵⁹ Shell Companies assert that Order No. 2023 requires that an interconnection customer shall receive an extension of fewer than three cumulative years of the generating facility's commercial operation date without requiring the interconnection customer to request the extension from the transmission provider, and this up to three-year period can be before or after execution of an LGIA (or request that the LGIA be filed unexecuted), with the only difference between before and after being the date from which the extension period is calculated.⁶⁰ Shell Companies state that this implicitly includes the time during which an LGIA is being negotiated, and Order No. 2023 mentions no "blackout" period in between precluding such extensions during the negotiation of an LGIA.⁶¹ Shell Companies also state that PJM and transmission owners often produce new information during the negotiation phase that materially impacts, if not outright requires, a commercial operation

⁵⁷ Second Compliance Filing at 11-12.

⁵⁸ Shell Companies Protest at 18-20 (quoting Second Compliance Filing at 11).

⁵⁹ *Id.* at 21.

⁶⁰ *Id.* at 18-19 (citing Order No. 2023, 184 FERC ¶ 61,054 at P 293).

⁶¹ *Id.* at 20.

date extension.⁶² Shell Companies argue that PJM is hampering efforts at communication between the interconnection customer and the transmission owner, especially before and during the first half of the 60-day Final Agreement Negotiation Phase, which makes it difficult for interconnection customers to get the information needed to make commercial operation date decisions before the negotiation phase.⁶³ Shell Companies state that PJM's proposal may be an oversight by PJM because PJM's requested independent entity variation does not mention the fact that interconnection customers will not be able to effectuate commercial operation date extensions during the negotiation phase, and PJM does not specifically request an independent entity variation for this departure from the Commission's requirements and the *pro forma* LGIA.⁶⁴

iv. Answers

37. PJM answers that Shell Companies' request that interconnection customers be allowed to propose changes to projects' commercial operation dates during the Final Agreement Negotiation Phase of the interconnection process will not work.⁶⁵ PJM asserts that Shell Companies ignore that the Final Agreement Negotiation Phase, which lasts only 60 days, is the period in which PJM is negotiating service agreements with all the interconnection customers in a Cycle, for which PJM must finalize at least one agreement each, and often more than one agreement. PJM also asserts that Shell Companies overlook the fact that the Final Agreement Negotiation Phase is for negotiation of the terms and conditions of the service agreements, not to change the scope, schedule, or cost of interconnection.⁶⁶ PJM states that it establishes fuel-type-specific default project milestones based on industry-average assumptions at the outset of the Final Agreement Negotiation Phase and negotiates adjustments to that schedule for individual projects. PJM argues that Shell Companies' proposal, in contrast, would have interconnection customers potentially changing their projects' commercial operation dates on day 50 or 55 of the Final Agreement Negotiation Phase, thereby potentially causing several other milestone dates for those projects to change.⁶⁷ PJM states that Shell Companies also do not address why an interconnection customer would need to make a change to its project's commercial operation date at such a late stage in the process

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ PJM Answer at 22.

⁶⁶ *Id.*

⁶⁷ *Id.* at 22-23.

and that, by the time the Final Agreement Negotiation Phase is reached, a project will have completed the study process. PJM further states that an interconnection customer should have final site control and have met other pre-service agreement milestones for permitting and acquisition in preparation for the start of construction activities within the next six months.⁶⁸

38. Shell Companies answer that, from a practical standpoint, PJM's proposed limitation on the time period for extension of commercial operation dates will prevent an interconnection customer from knowing the date that any network upgrades are expected to be completed and go into service.⁶⁹ Shell Companies state that an interconnection customer needs the flexibility to negotiate its commercial operation date during the Final Agreement Negotiation Phase because the interconnection customer will only learn of the timing associated with the construction of network upgrades, including local and system reliability network upgrades, at the beginning of the Final Agreement Negotiation Phase's 60-day period, which coincides with the interconnection customer's receipt of the final Phase III study results.⁷⁰ Shell Companies state that the interconnection customer cannot know if its proposed commercial operation date is feasible until it knows when the local network upgrades needed to support its interconnection will go into service, and if any non-local system reliability network upgrades will delay the generating facility's ability to operate at full output.⁷¹ Shell Companies state that PJM fails to clarify that the interconnection customer is not allowed to communicate with the interconnecting transmission owner prior to conclusion of the 30-day Decision Point 3 window, which runs concurrently with the first 30 days of the 60-day Final Agreement Negotiation Period.⁷² Shell Companies detail their recent experience negotiating commercial

⁶⁸ *Id.* at 23 (citing First Compliance Order, 192 FERC ¶ 61,077 at PP 66-67; PJM Tariff, pt. VII, subpt. D, §§ 307 (Introduction) (1.0.0), 308 (Phase I) (0.0.0), 310 (Phase II) (0.0.0), 312 (Phase III) (0.0.0); PJM Interconnection, L.L.C., *PJM Manual 14H: New Service Requests Cycle Process*, Ex. 4 (Cycle Process Overview) (Sep. 25, 2025), <https://pjm.com/-/media/DotCom/documents/manuals/m14h.pdf> (PJM Manual 14H)).

⁶⁹ Shell Companies Answer at 3-4.

⁷⁰ *Id.* at 4.

⁷¹ *Id.*

⁷² *Id.*

operation dates as an interconnection customer to support their assertions regarding the need for flexibility.⁷³

v. Commission Determination

39. We deny PJM's requested independent entity variation for its Tariff to remain silent regarding changes to the commercial operation date until the interconnection customer executes, or requests the unexecuted filing of, a GIA. While PJM states that it imposes no restrictions on interconnection customer extensions to their commercial operation date prior to the Final Agreement Negotiation Phase, we agree with Shell Companies that PJM's Tariff is ambiguous and find that the lack of clarity in the Tariff on extensions prior to the interconnection customer's execution, or request for an unexecuted filing of, a GIA, including during the Final Agreement Negotiation Phase, does not comply with the requirements of Order Nos. 2023 and 2023-A.⁷⁴ Accordingly, we direct PJM to submit a further compliance filing, within 60 days of the date of this order, to clarify how PJM proposes to comply with the requirement in section 4.4.5 of the *pro forma* LGIP for the commercial operation date in the initial interconnection request to be used in calculating the permissible extension of the commercial operation date until the interconnection customer executes, or requests the unexecuted filing of, an LGIA, or justify its proposal under the independent entity variation standard.

f. Point of Interconnection and Modifications

40. The Commission adopted section 3.1.2 (Submission) of the *pro forma* LGIP to require an interconnection customer to select a definitive point of interconnection when executing the cluster study agreement.⁷⁵

41. The Commission adopted several revisions to the *pro forma* LGIP related to the process by which an interconnection customer can make an interconnection request. The Commission revised section 4.1 (Queue Position) of the *pro forma* LGIP to provide that all interconnection requests within a cluster be considered equally queued and accordingly modified the definition of "queue position."⁷⁶ The Commission renamed and revised section 4.2 (General Study Process) of the *pro forma* LGIP to require transmission providers to perform interconnection studies within the cluster study

⁷³ *Id.* at 4-6.

⁷⁴ Order No. 2023, 184 FERC ¶ 61,054 at P 293; *see also pro forma* LGIP § 4.4.5.

⁷⁵ Order No. 2023, 184 FERC ¶ 61,054 at P 200; *see also pro forma* LGIP § 3.1.2.

⁷⁶ Order No. 2023, 184 FERC ¶ 61,054 at PP 277, 283; *see also pro forma* LGIP § 4.1.

process.⁷⁷ The Commission revised section 4.4 (Modifications) of the *pro forma* LGIP to provide that moving a point of interconnection shall result in the loss of a queue position if it is deemed a material modification by the transmission provider.⁷⁸ The Commission also revised section 4.4.1 of the *pro forma* LGIP to incorporate the material modification process as part of the cluster study process.⁷⁹

i. First Compliance Order

42. The Commission granted PJM's requested independent entity variations to: (1) retain its current Tariff provisions on the interconnection customer's selection of a point of interconnection in the cluster study process; and (2) allow PJM to maintain its existing material modification provisions that allow interconnection customers to retain their queue position under a limited set of permissible changes to points of interconnection at Decision Point I.⁸⁰ However, the Commission found that PJM had not sufficiently supported its proposal to maintain its existing definition of "material modification." Specifically, the Commission stated that PJM's Tariff definition limits modifications to an executed GIA, and found that while PJM explained that its Tariff includes a defined list of permissible changes to an interconnection request at Decision Points I and II prior to executing a GIA, PJM did not reflect or otherwise explain how PJM's definition of "material modification" accomplishes the purpose of Order No. 2023's *pro forma* LGIP to allow modification requests to be submitted during any point of the interconnection study process.⁸¹ Accordingly, the Commission directed PJM to submit a further compliance filing that revises PJM's definition of "material modification," or justify its proposal under the independent entity variation standard.

ii. Second Compliance Filing

43. PJM reiterates its request for an independent entity variation to maintain its current definition of "material modification," which PJM explains limits PJM's analysis of material modification requests to a GIA and does not contemplate changes during the cluster study process.⁸² PJM explains that its Tariff imposes a bright-line rule for

⁷⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 278; *see also pro forma* LGIP § 4.2.

⁷⁸ Order No. 2023, 184 FERC ¶ 61,054 at P 283; *see also pro forma* LGIP § 4.4.

⁷⁹ Order No. 2023, 184 FERC ¶ 61,054 at P 285; *see also pro forma* LGIP § 4.4.1.

⁸⁰ First Compliance Order, 192 FERC ¶ 61,077 at PP 106-107.

⁸¹ *Id.* P 109.

⁸² Second Compliance Filing at 13; *see also* PJM Tariff, pt. VIII, subpt. A, § 400M (0.1.0).

changes to the point of interconnection: “the Point of Interconnection *must* be finalized before the close of the Decision Point I Phase.”⁸³ PJM also states that requests for changes to the point of interconnection made after the close of Decision Point I will not be considered.⁸⁴ Accordingly, PJM states, there is no application of the material modification test to requests to modify the point of interconnection during the three phases of a Cycle and thus no inconsistency in the Tariff that requires resolution.⁸⁵

44. PJM further explains that its Tariff limits the ability to modify a generating facility’s point of interconnection or to make other specified types of modifications to specific defined points in the interconnection process (e.g., Decision Points I and II).⁸⁶ PJM clarifies that it does not evaluate these requests using a material modification analysis or other tests; rather, PJM states if the modifications are made at the permissible points in the process, then those modifications are permitted, but if the modifications are requested at any later point in the process, then those modifications are not permitted.⁸⁷ PJM notes that the Commission found that its bright-line approach to modifications strikes a “reasonable balance” between the engineering labor needed to advance “feasible projects” and reducing late-stage modification or withdrawals that could slow the interconnection process.⁸⁸ PJM reiterates that its request for an independent entity variation is just and reasonable and consistent with the objectives of Order Nos. 2023 and 2023-A because the proposal represents a bright-line approach to modifications, which are not dependent on the definition of “material modification.”⁸⁹

iii. Commission Determination

45. We grant PJM’s independent entity variation to maintain its definition of “material modification,” and find that the proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A. More specifically, PJM’s Tariff limits material modifications to GIAs; during

⁸³ Second Compliance Filing at 13 (citing PJM Tariff, pt. VIII, subpt. C, § 406 (1.1.0), § 406(B)(4)(a)).

⁸⁴ *Id.* (citing PJM Tariff, pt. VIII, subpt. C, § 406 (1.1.0), § 406(B)(4)(a)(1)(a)).

⁸⁵ *Id.* at 13-14.

⁸⁶ *Id.* at 14.

⁸⁷ *Id.*

⁸⁸ *Id.* (quoting First Compliance Order, 192 FERC ¶ 61,077 at P 108).

⁸⁹ *Id.*

the interconnection study process, the Tariff does not contemplate material modifications but instead lists permissible, specific types of modifications to interconnection requests at defined points of the study process (e.g., moving the point of interconnection along the same segment of transmission line at Decision Point I).⁹⁰ Because PJM clarifies that its set of permissible changes to interconnection requests during the study process is not dependent on PJM's definition of material modification and because the Commission granted PJM's independent entity variation to maintain its existing material modification provisions that allow interconnection customers to retain their queue position under a limited set of permissible changes, we find that PJM's existing definition of material modification, which limits modifications to GIAs, reflects the structure of PJM's process. We find that PJM's: (1) existing material modification provisions, and (2) proposal to maintain its existing definition of "material modification," accomplish the purposes of Order Nos. 2023 and 2023-A because, together, they provide balance between allowing flexibility for modifications and providing transmission providers with the information necessary to conduct the cluster study.⁹¹

g. Surety Bonds

46. The Commission modified sections 3.4.2, 5.1.1.1 (Transitional Serial Study), 5.1.1.2 (Transitional Cluster Study), 7.5, and 8.1 of the *pro forma* LGIP to reflect that acceptable forms of security for the commercial readiness deposit and deposits prior to the transitional serial study, the transitional cluster study, the cluster restudy, and the interconnection facilities study should include not only cash or an irrevocable letter of credit, but also surety bonds or other forms of financial security that are reasonably acceptable to the transmission provider.⁹²

i. First Compliance Order

47. The Commission rejected PJM's proposal to prohibit the use of surety bonds as financial security for commercial readiness deposits and deposits prior to the cluster restudy and the interconnection facilities study. The Commission directed PJM to submit a further compliance filing that revises its Tariff to allow the use of surety bonds as financial security for commercial readiness deposits.⁹³

⁹⁰ *Id.* at 13-14.

⁹¹ Order No. 2023, 184 FERC ¶ 61,054 at P 201.

⁹² Order No. 2023-A, 186 FERC ¶ 61,199 at P 185; *see also pro forma* LGIP §§ 3.4.2, 5.1.1.1, 5.1.1.2, 7.5, 8.1.

⁹³ First Compliance Order, 192 FERC ¶ 61,077 at P 116.

ii. Second Compliance Filing

48. PJM proposes revisions to Tariff, Part VIII, Subpart B, sections 403(A)(1)(a) and 403(A)(5)(b) to allow the use of surety bonds as financial security for commercial readiness deposits, in the form of a required Irrevocable Surety Bond for Readiness Deposits that PJM will post on its website.⁹⁴ PJM asserts that the posted exemplar Irrevocable Surety Bond for Readiness Deposits contains requirements substantially similar to the Commission-approved surety bond parameters for members' participation in PJM markets.⁹⁵ PJM states that it proposes revisions that further specify that only one form of payment (wire transfer, letter of credit, or surety bond) may be submitted for each readiness deposit, but different forms of payment may be used for different readiness deposits. PJM asserts that the restriction to one form of payment for each readiness deposits simplifies PJM's administration while allowing flexibility for interconnection customers to meet the financial requirements for their projects.⁹⁶

iii. Commission Determination

49. We accept PJM's proposed Tariff revisions to allow the use of surety bonds as financial security for commercial readiness deposits. We find that PJM's proposed revisions comply with the requirements of Order Nos. 2023 and 2023-A and the Commission's directive in the First Compliance Order.

4. Allocation of Cluster Study Costs

50. In Order No. 2023, the Commission revised section 13.3 (Obligation for Study Cost) of the *pro forma* LGIP to allow each transmission provider to propose its own ratio for allocating the shared costs of cluster studies, provided that between 10% and 50% of study costs must be allocated on a per capita basis, with the remainder (between 50% and 90%) allocated pro rata by MW.⁹⁷

a. First Compliance Order

51. In the First Compliance Order, the Commission found that PJM's proposal to retain its current Tariff approach of allocating cluster study costs on a 100% per capita

⁹⁴ Second Compliance Filing at 15; PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0), § 403(A).

⁹⁵ Second Compliance Filing at 15.

⁹⁶ *Id.*

⁹⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 416; *see also pro forma* LGIP § 13.3.

basis did not comply with the requirement of Order Nos. 2023 and 2023-A to allocate between 10% and 50% of study costs on a per capita basis, with the remainder (between 50% and 90%) allocated on a pro rata basis.⁹⁸ Accordingly, the Commission directed PJM to submit a further compliance filing that either adopts *pro forma* LGIP section 13.3 (Obligation for Study Costs) in its LGIP or justifies its proposal under the independent entity variation standard.⁹⁹

b. Second Compliance Filing

52. In its second compliance filing, PJM proposes revisions to Tariff, Part VIII, Subpart A, section 401(D) to (1) allocate 50% of the cluster study costs for each Cycle among the interconnection customers in the Cycle on a per capita basis, and (2) allocate 50% of the cluster study costs among the interconnection customers in the Cycle pro rata based on each interconnection customer's generating facility's MW of energy or capacity, whichever is greater.¹⁰⁰ PJM asserts this allocation is just and reasonable and consistent with the requirements of Order Nos. 2023 and 2023-A and *pro forma* LGIP section 13.3.

c. Commission Determination

53. We accept PJM's proposed revisions to allocate 50% of the cluster study costs among the interconnection customers in a Cycle on a per capita basis and 50% of the cluster study costs on a pro-rata basis by MW of energy or capacity, whichever is greater. We find that PJM's proposed revisions concerning allocation of cluster study costs comply with the requirements of Order Nos. 2023 and 2023-A, as they are consistent with the requirement of Order Nos. 2023 and 2023-A to allocate between 10% and 50% of study costs on a per capita basis, with the remainder (between 50% and 90%) allocated on a pro rata basis.¹⁰¹

⁹⁸ First Compliance Order, 192 FERC ¶ 61,077 at P 121.

⁹⁹ *Id.*

¹⁰⁰ Second Compliance Filing at 16; PJM Tariff, pt. VIII, subpt. A, § 401 (3.0.0), § 401(D).

¹⁰¹ Order No. 2023, 184 FERC ¶ 61,054 at P 416; *see also pro forma* LGIP § 13.3.

5. Allocation of Cluster Network Upgrade Costs

54. In Order No. 2023, the Commission required transmission providers to allocate system network upgrade¹⁰² costs based on a proportional impact method.¹⁰³ Specifically, the Commission added *pro forma* LGIP section 4.2.1 (Cost Allocation for Interconnection Facilities and Network Upgrades) to require a transmission provider to: (1) allocate the costs of network upgrades located at substations equally among each generating facility interconnecting to the same substation (i.e., on a per capita basis); and (2) direct the transmission provider on compliance to provide tariff provisions that describe, for each type of system network upgrade that a transmission provider would identify in the cluster study process, how the costs of each system network upgrade type will be allocated among the interconnection customers within the cluster.¹⁰⁴ The Commission added to the *pro forma* LGIP and *pro forma* LGIA definitions for “proportional impact method,” “substation network upgrades,” and “system network upgrades” and modified the existing definition of “stand alone network upgrades.”¹⁰⁵ The Commission required the transmission provider’s revisions on compliance to provide that costs for a discrete network upgrade identified in the cluster study process are allocated to only the interconnection customers in the cluster that are shown through technical analyses to contribute to the need for that discrete network upgrade.¹⁰⁶ The Commission also required transmission providers to allocate the costs of interconnection facilities (i.e., both the interconnection customer’s interconnection facilities and transmission provider’s interconnection facilities) on a per capita basis. The Commission further provided that interconnection customers may agree to share interconnection facilities, that the per capita cost allocation will apply only where interconnection customers agree to share interconnection facilities, and that interconnection customers

¹⁰² The *pro forma* LGIP defines system network upgrades as “Network Upgrades that are required beyond the substation located at the Point of Interconnection.” *Pro forma* LGIP § 1.

¹⁰³ The *pro forma* LGIP defines proportional impact method as “a technical analysis conducted by Transmission Provider to determine the degree to which each Generating Facility in the Cluster Study contributes to the need for a specific System Network Upgrade.” *Id.*

¹⁰⁴ Order No. 2023, 184 FERC ¶ 61,054 at PP 453, 461; *see also pro forma* LGIP § 4.2.1.

¹⁰⁵ Order No. 2023, 184 FERC ¶ 61,054 at PP 458, 460; *see also pro forma* LGIP § 1; *see also pro forma* LGIA art. 1.

¹⁰⁶ Order No. 2023, 184 FERC ¶ 61,054 at P 461.

may choose a different cost sharing arrangement upon mutual agreement.¹⁰⁷ Finally, the Commission revised Appendix A (Interconnection Facilities, Network Upgrades and Distribution Upgrades) of the *pro forma* LGIA to include substation network upgrades and system network upgrades.¹⁰⁸

55. In Order No. 2023-A, the Commission clarified that cost allocation for substation network upgrades is based on the number of interconnection facilities connecting to the substation at the point of interconnection. The transmission provider must first allocate the costs of substation network upgrades on a per capita basis for each interconnection facility connecting to the substation, and then allocate those costs on a per capita basis between each generating facility using the interconnection facility. In conjunction, the Commission revised *pro forma* LGIP section 4.2.1.1.a to clarify that substation network upgrade costs shall be allocated first to interconnection facilities interconnecting to the substation at the same voltage level, and then per capita to each generating facility sharing the interconnection facility.¹⁰⁹

a. First Compliance Order

56. In the First Compliance Order, the Commission accepted PJM's independent entity variation to maintain the existing provisions in its *pro forma* GIA regarding stand-alone network upgrades.¹¹⁰ However, the Commission found that PJM's proposal to retain its existing Tariff definition of "network upgrade" does not comply with the requirement in Order Nos. 2023 and 2023-A to adopt definitions of "system network upgrades" and "substation network upgrades" because PJM's existing Tariff definition does not distinguish between types of network upgrades nor does its Tariff distinguish the cost allocation of substation network upgrades and system network upgrades.¹¹¹ The Commission also noted that PJM neither addressed how its Tariff complies with the requirement to adopt the definition of "proportional impact method," nor addressed how it complies with the requirements in Order Nos. 2023 and 2023-A to provide how the costs of shared interconnection facilities will be allocated, and to revise Appendix A (Interconnection Facilities, Network Upgrades and Distribution Upgrades) of the *pro forma*

¹⁰⁷ *Id.* P 454.

¹⁰⁸ *Pro forma* LGIA app. A.

¹⁰⁹ Order No. 2023-A, 186 FERC ¶ 61,199 at PP 177-178; *see also pro forma* LGIP § 4.2.1.1.a.

¹¹⁰ First Compliance Order, 192 FERC ¶ 61,077 at PP 130, 131.

¹¹¹ *Id.* P 131. *See also* PJM Tariff, pt. VIII, subpt. A, § 400N (Definitions N) (2.0.0).

LGIA to include substation network upgrades and system network upgrades.¹¹² Accordingly, the Commission directed PJM to submit a further compliance filing to adopt the *pro forma* LGIP and *pro forma* LGIA definitions of “system network upgrades,” “substation network upgrades,” and “proportional impact method,” provisions for allocating the cost of shared interconnection facilities, and revisions to Appendix A of the *pro forma* LGIA to include substation network upgrades and system network upgrades required by Order Nos. 2023 and 2023-A or justify its variations under the independent entity variation standard.

57. The Commission also denied PJM’s requested independent entity variation to retain its existing Tariff provisions regarding, and omit description of, how the costs of each system network upgrade type will be allocated among the interconnection customers within the cluster.¹¹³ Accordingly, the Commission directed PJM to submit a further compliance filing to revise the Tariff to describe the method transmission providers will use for allocating costs of each type of system network upgrade, consistent with the Commission’s rule of reason.

58. In addition, the Commission found that PJM did not address how it complies with the requirement in Orders Nos. 2023 and 2023-A to allocate the costs of network upgrades located at substations.¹¹⁴ Accordingly, the Commission directed PJM to submit a further compliance filing to revise the Tariff to describe that PJM will first allocate the costs of substation network upgrades on a per capita basis for each interconnection facility connecting to the substation at the same voltage level, and then allocate those costs on a per capita basis between each generating facility using the interconnection facility.

b. Second Compliance Filing

59. PJM proposes revisions to Tariff, Part VIII, Subpart A, section 400 to add definitions of the “Proportional Impact Method,” “Substation Network Upgrade,” and “System Network Upgrade.” PJM also proposes to modify the definition of (1) “Network Upgrades” to specify that network upgrade costs are allocated based on type, and

¹¹² First Compliance Order, 192 FERC ¶ 61,077 at P 131 (citing *pro forma* LGIA app. A).

¹¹³ *Id.* P 132.

¹¹⁴ *Id.* P 133.

(2) “Transmission Owner Interconnection Facilities” to specify that the costs of shared transmission owner interconnection facilities are allocated on a per capita basis.¹¹⁵

60. Regarding the *pro forma* LGIP and *pro forma* LGIA definition for “proportional impact method,” PJM seeks an independent entity variation and states that PJM’s proposed Tariff defines “Proportional Impact Method” as “the method by which Transmission Provider determines and identifies in a System Impact Study, each Project Developer’s pro rata cost allocation for a System Network Upgrade based on each Project Developer’s proportional contribution to the need for the System Network Upgrade.”¹¹⁶

61. Regarding the *pro forma* LGIP and *pro forma* LGIA definition for “network upgrade,” PJM requests an independent entity variation to modify its proposed Tariff definition for “Network Upgrades” to address the cost allocation for such facilities and remove duplicative language concerning Stand Alone Network Upgrades.¹¹⁷ PJM proposes to define “Network Upgrades” as “modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider’s overall Transmission System for the general benefit of all users of such Transmission System. Costs for Network Upgrades are allocated based on the type of Network Upgrade.”¹¹⁸ PJM seeks an independent entity variation from the *pro forma* LGIP and *pro forma* LGIA definition for “substation network upgrade” and states that its proposed Tariff defines “Substation Network Upgrade” as:

a Network Upgrade required to establish the Point of Interconnection and enable a Generating Facility or Generating Facilities to interconnect to the Transmission System. Substation Network Upgrades include, but are not limited to, construction or modification of substations, circuit breakers, buswork, protection schemes, or other infrastructure necessary to create or reinforce the Point(s) of Interconnection in accordance with Good Utility Practice and applicable NERC standards. Substation Network Upgrades are designed to support the operation, reliability and stability of the Transmission System with or without the operation of the Generating Facility and are distinct from System Network

¹¹⁵ Second Compliance Filing at 18.

¹¹⁶ PJM Tariff, pt. VIII, subpt. A, § 400P (Definitions P) (3.0.0).

¹¹⁷ Second Compliance Filing at 17.

¹¹⁸ PJM Tariff, pt. VIII, subpt. A, § 400N (Definitions N) (3.0.0).

Upgrades. Costs for Substation Network Upgrades are allocated to the Project Developers within the same Cycle causing the need for the Substation Network Upgrade on a per capita basis. Substation Network Upgrades are subject to the Site Control provisions in Tariff, Part VIII, Subpart A, section 402. A Substation Network Upgrade can be a Stand Alone Network Upgrade. Cost and schedule estimates for Substation Network Upgrades are provided in the Phase II Facilities Study.¹¹⁹

62. PJM seeks an independent entity variation from the *pro forma* LGIP and *pro forma* LGIA definition for “system network upgrade” and states that its proposed Tariff defines “System Network Upgrade” as:

a Network Upgrade required to mitigate flow gate violations, thermal overloads, voltage issues, or other reliability constraints identified in the System Impact Study due to the addition of one or more Generating Facilities. System Network Upgrades may include, but are not limited to, reconductoring, line upgrades, transformer replacements, or other modifications to enhance system capacity or stability. Costs for System Network Upgrades shall be allocated among Project Developers in the same Cycle using the Proportional Impact Method. A Project Developer is not required to obtain Site Control for a System Network Upgrade; however, Project Developers will bear the cost of land acquisition if land is required for the construction of the System Network Upgrade. A System Network Upgrade can be a Stand Alone Network Upgrade. Cost and schedule estimates for System Network Upgrades are provided in the Phase III Facilities Study.¹²⁰

63. PJM proposes revisions to section 404 of its Tariff to provide that “All New Service Requests that contribute to the need for a Network Upgrade will receive cost allocation for that Network Upgrade in accordance with the Tariff,”¹²¹ and to clarify that an interconnection customer is responsible for all the costs of the interconnection facilities necessary to accommodate its generating facility’s interconnection to the

¹¹⁹ *Id.* § 400S (Definitions S) (4.0.0).

¹²⁰ *Id.*

¹²¹ *Id.*, pt. VIII, subpt. C, § 404 (2.0.0), § 404(A)(5)(c).

transmission system.¹²² PJM also proposes to revise Tariff, Part IX, Subpart B GIA Specifications to separately specify Substation Network Upgrades and System Network Upgrades in a table and to revise the Wholesale Market Participant Agreement (WMPA) specifications to separately specify Substation Network Upgrades and System Network Upgrades.¹²³ PJM submits that all of its revisions concerning network upgrades are consistent with the requirements of Order Nos. 2023 and 2023-A, with only PJM-specific modifications and are just and reasonable, and the Commission therefore should accept them as compliant.

c. Protests

64. Shell Companies protest PJM's proposed definition of "Proportional Impact Method."¹²⁴ Specifically, Shell Companies argue that PJM's proposed definition varies from the *pro forma* definition by removing the requirement that a technical analysis be conducted to determine each interconnection customer's contribution to the need for a system network upgrade. Shell Companies argue that PJM does not define in its Tariff what "method" it intends to employ and instead includes a more expansive definition that would allow PJM to assign costs to generator interconnection customers for "regional topology upgrades" that are not based upon the individual interconnection customer's contribution to the reliability violation identified by PJM's interconnection studies.¹²⁵ Shell Companies argue that PJM makes no attempt to explain in its Second Compliance Filing how its proposed revisions are just and reasonable and consistent with the requirements of Order No. 2023-A, nor does it provide any support for an independent entity variation for these proposed revisions outside of stating that it has made "only PJM-specific modifications" to the Order No. 2023 provisions.¹²⁶

65. Clean Energy Associations assert that PJM's proposed definition for "Proportional Impact Method" enables PJM to allocate costs based on economically derived proportional metrics unrelated to reliability impacts. Clean Energy Associations assert that PJM's proposed definition is inconsistent with both Order No. 2023 and

¹²² *Id.* § 404(A)(6) ("A Project Developer shall be responsible for all costs of the Interconnection Facilities necessary to accommodate its Generating Facility's Interconnection to the Transmission System.").

¹²³ *Id.*, pt. IX, subpt. B, GIA Specs (3.0.0); *Id.*, pt. IX, subpt. C, WMPA Schedules A-F (1.0.0).

¹²⁴ Shell Companies Protest at 7-8.

¹²⁵ *Id.* at 7-10.

¹²⁶ *Id.* at 10 (citing Second Compliance Filing at 18).

PJM's current Tariff, as it could allow PJM to assign cost responsibility for all upgrades identified in a cluster study to nearly all interconnection customers, even those whose facilities have a negligible or negative effect on the relevant constraint.¹²⁷ Clean Energy Associations request that the Commission direct PJM to clarify that: (1) the proportional impact method must remain an engineering-based methodology that quantifies each interconnection customer's contribution to a specific reliability violation or constraint; (2) cost responsibility for Regional Topology Upgrades or System Network Upgrades may only be assigned to those projects that contribute to a reliability violation; and (3) PJM may not use the proportional impact method to introduce or justify new upgrades during Phase III that were not identified in Phase II.¹²⁸

d. Answer

66. PJM argues that Shell Companies' and Clean Energy Associations' arguments regarding PJM's proportional impact method fail to understand PJM's clustered Cycle process.¹²⁹ PJM contends that its holistic view of upgrades needed for a Cycle is integral to its clustered Cycle process. PJM further argues that Shell Companies and Clean Energy Associations err in claiming that PJM's proposed definition of "proportional impact method" does not limit cost allocation to projects' specific reliability violations.¹³⁰ PJM asserts that it still identifies the flowgates that are overloaded by specific projects and each project's contribution to such overloads.¹³¹ PJM explains that under the Cycle approach, PJM may identify lower cost topology upgrades, such as a new transmission line or switchyard, that eliminate the need for the upgrades for which individual projects are responsible. PJM further explains those projects will be allocated the costs of the topology upgrade based on their cost responsibility for the eliminated upgrades, so that cost responsibility is still linked to an individual project's impact on the transmission system.

¹²⁷ Clean Energy Associations Protest at 13-14 (citing Order No. 2023, 184 FERC ¶ 61,054 at P 453 n.914; *pro forma* LGIP § 1).

¹²⁸ *Id.* at 14.

¹²⁹ PJM Answer at 19.

¹³⁰ *Id.* at 20.

¹³¹ *Id.* (citing PJM Tariff, pt. VII, subpt. D, § 307 (1.0.0); PJM Manual 14H, § 4.2.1).

e. **Commission Determination**

67. We find that PJM’s proposal regarding allocation of cluster network upgrade costs partially complies with the requirements of Order Nos. 2023 and 2023-A and the directives in the First Commission Order. As discussed below, we accept in part PJM’s proposed Tariff revisions regarding allocation of cluster network upgrade costs and direct further compliance.

68. We grant PJM’s proposal for independent entity variations regarding its proposed terms and definitions of “Substation Network Upgrades,” “Network Upgrades,” and “Proportional Impact Method,” to address the requirement in Order Nos. 2023 and 2023-A to adopt definitions of “system network upgrades,” and “substation network upgrades” in order to distinguish between types of network upgrades.¹³² We find that PJM’s proposed definitions of “Substation Network Upgrades,” “Network Upgrades,” and “Proportional Impact Method” are just and reasonable and not unduly discriminatory or preferential and accomplish the Commission’s purposes of Order Nos. 2023 and 2023-A because, consistent with both the *pro forma* LGIP and *pro forma* LGIA definitions, PJM’s proposed definitions, respectively, establish substation network upgrades as those needed to establish a point of interconnection, differentiate between the types of network upgrades in the Tariff, and establish that the proportional impact method is a cost allocation method based on a project’s proportional contribution to the need for a system network upgrade.¹³³ Additionally, we find that PJM’s proposed revision to its definition of “Transmission Owner Interconnection Facilities” to specify that the costs of shared transmission owner interconnection facilities are allocated on a per capita basis satisfies the directive in the First Compliance Order for PJM to revise its Tariff to provide how the costs of shared interconnection facilities will be allocated.¹³⁴

69. We deny PJM’s request for an independent entity variation from the *pro forma* LGIP and *pro forma* LGIA definition of “system network upgrade,” as PJM has not justified how its proposed Tariff definition accomplishes the purposes of Order Nos. 2023 and 2023-A. PJM’s proposed definition for “System Network Upgrade” does not specify that System Network Upgrades are located beyond the point of interconnection of a substation, which does not accomplish the purposes of Order Nos. 2023 and 2023-A to distinguish substation network upgrades from system network

¹³² First Compliance Order, 192 FERC ¶ 61,077 at P 131 (citing PJM Tariff, pt. VIII, subpt. A, § 400N (Definitions N) (3.0.0)).

¹³³ Order No. 2023-A, 186 FERC ¶ 61,199 at PP 177-178, 458, 460; *pro forma* LGIP § 4.2.1.1.a., § 1; *pro forma* LGIA art. 1. *See also* First Compliance Order, 192 FERC ¶ 61,077 at P 131.

¹³⁴ First Compliance Order, 192 FERC ¶ 61,077 at P 131.

upgrades.¹³⁵ Accordingly, we direct PJM to submit a further compliance filing within 60 days of the date of this order to adopt the *pro forma* LGIA and *pro forma* LGIP definition for “system network upgrades” or justify its proposal under the independent entity variation standard.

70. We find that PJM’s proposal to rely on its proposed definitions for “System Network Upgrade” and “Proportional Impact Method” for compliance with Order No. 2023’s requirement for transmission providers to provide a proportional impact method – i.e., tariff provisions that describe, for each type of system network upgrade that a transmission provider would identify in the cluster study process, how the costs of each system network upgrade type will be allocated among the interconnection customers within the cluster does not comply.¹³⁶ Order No. 2023 required that each transmission provider’s tariff revisions on compliance provide that costs for a discrete network upgrade identified in the cluster study process are allocated to only the interconnection customers in the cluster that are shown through technical analyses to contribute to the need for that discrete network upgrade.¹³⁷ Although PJM has proposed definitions for “Proportional Impact Method”¹³⁸ and “System Network Upgrades”¹³⁹ that generally discuss how system network upgrade costs will be allocated among interconnection customers in a cluster, PJM’s Tariff specifies that a pro rata allocation will be used to determine the project’s proportional contribution without specifying which technical analyses will be used to make this determination.¹⁴⁰ Accordingly, we direct PJM to

¹³⁵ Order No. 2023, 184 FERC ¶ 61,054 at P 458 (modifying definitions of substation network upgrades and system network upgrades to distinguish them and “ensure that the costs for the two types of network upgrades are allocated consistent with the Commission’s interconnection pricing policy, which establishes the principles for allocating the costs of network upgrades”).

¹³⁶ *Id.* PP 453, 461; First Compliance Order, 192 FERC ¶ 61,077 at P 132.

¹³⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 461.

¹³⁸ Providing that “each Project Developer’s pro rata cost allocation for a System Network Upgrade based on each Project Developer’s proportional contribution to the need for the System Network Upgrade.”

¹³⁹ Providing that “Costs for System Network Upgrades shall be allocated among Project Developers in the same Cycle using the Proportional Impact Method.”

¹⁴⁰ In contrast, the Commission accepted the tariff revisions proposed in Southwest Power Pool’s Order No. 2023 compliance filing providing that, “An allocation of the cost of each System Network Upgrade to each Interconnection Customer shall be determined on a pro-rata basis for the positive incremental power flow impacts of the requested service on such Network Upgrade in proportion to the total of all positive incremental

submit a further compliance filing within 60 days of the date of this order, to provide Tariff revisions that describe, for each discrete type of system network upgrade PJM would identify in the cluster study process, how the costs of each system network upgrade type will be allocated among the interconnection customers within the cluster that are shown through technical analyses to contribute to the need for that discrete network upgrade.

71. We do not reach the merits of Shell Companies' and Clean Energy Association's arguments regarding PJM's proportional impact method because, as discussed above, we find that PJM's proposed revisions first fail to describe the cost allocation method for each type of network upgrade as required by Order Nos. 2023 and 2023-A. We find Clean Energy Associations' request that the Commission clarify that PJM may not use the proportional impact method to introduce or justify new upgrades during Phase III not identified in Phase II to be outside the scope of this proceeding because Order No. 2023 did not establish such a limitation on transmission providers.

72. We find that PJM has not complied with the Commission's directive to adopt the cost allocation method for substation network upgrades in the *pro forma* LGIP or justified its deviation under the independent entity variation standard.¹⁴¹ The *pro forma* LGIP provides that the cost of substation network upgrades shall be allocated first to interconnection facilities interconnecting to the substation at the same voltage level, and then per capita to each generating facility sharing the interconnection facility.¹⁴² PJM's

power flow impacts on such System Network Upgrade. ...The cost of a System Network Upgrade allocated to each request shall be proportional to the average positive incremental impact of each request on such System Network Upgrade divided by the total average positive incremental impact of all requests included in the Cluster Study on such Network Upgrade." *Sw. Power Pool, Inc.*, 191 FERC ¶ 61,230, at PP 87-88 (2025) (citing SPP, Proposed Tariff, attach V, § 4 (9.0.0), § 4.2.2 (Cost Allocation for Interconnection Facilities and Network Upgrades)). Additionally, the Commission accepted tariff revisions proposed in Midcontinent Independent System Operator, Inc.'s Order No. 2023 compliance filing providing that thermal network upgrades "[w]ill be cost allocated per the pro rata share of MW impact of DPP projects on the constraints being alleviated by the upgrade, as further described in the Generator Interconnection Business Practices Manual, BPM 015." *Midcontinent Indep. Sys. Operator, Inc.*, 194 FERC ¶ 61,203, at PP 45, 49 (2026) (citing MISO, Tariff, attach. X (178.0.0), § 4.2.1 (Cost Allocation for Interconnection Facilities and Network Upgrades)).

¹⁴¹ First Compliance Order, 192 FERC ¶ 61,077 at P 131 (citing PJM Tariff, pt. VIII, subpt. A, § 400N (Definitions N) (2.0.0)).

¹⁴² Order No. 2023-A, 186 FERC ¶ 61,199 at PP 177-178; *see also pro forma* LGIP § 4.2.1.1.a.

cost allocation method for substation network upgrades, as provided in PJM's definition of "Substation Network Upgrades," states that "Costs for Substation Network Upgrades are allocated to the Project Developers within the same Cycle causing the need for the Substation Network Upgrade on a per capita basis." PJM asserts that all of its revisions concerning network upgrades are just and reasonable and consistent with the requirements of Order Nos. 2023 and 2023-A, with only PJM-specific modifications, and the Commission therefore should accept them as compliant. We find that PJM's proposed cost allocation method for substation network upgrades does not account for shared interconnection facilities or require that PJM allocate the costs of substation network upgrades based on voltage, as Order Nos. 2023 and 2023-A require, and PJM does not justify these deviations under the independent entity variation standard. Accordingly, we direct PJM to submit a further compliance filing within 60 days of the date of this order to adopt the *pro forma* LGIP cost allocation method for substation network upgrades or justify its proposal under the independent entity variation standard.

73. We also find that PJM has not demonstrated how it complies with, or proposes to comply with, the requirement in Order Nos. 2023 and 2023-A to revise Appendix A (Interconnection Facilities, Network Upgrades and Distribution Upgrades) of the *pro forma* LGIA to include substation network upgrades and system network upgrades.¹⁴³ PJM proposes revisions to its GIA Specifications to include a table that separates Substation Network Upgrades and System Network Upgrades and revisions to its WMPA Specifications to separately specify Substation Network Upgrades and System Network Upgrades. However, PJM does not explain how these proposed revisions comply with Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit a further compliance filing within 60 days of the date of this order to explain how PJM proposes to comply with the requirement in Order Nos. 2023 and 2023-A to include substation network upgrades and system network upgrades through Appendix A of the *pro forma* LGIA or justify its proposal under the independent entity variation standard. We further reject PJM's proposed revisions to the GIA Specifications and WMPA Specifications¹⁴⁴ because PJM has not explained how these proposed revisions comply with Order Nos. 2023 and 2023-A.

6. Site Control

74. In Order No. 2023, the Commission revised section 3.4.2 of the *pro forma* LGIP to require interconnection customers to demonstrate 90% site control at the time of

¹⁴³ *Pro forma* LGIA app. A.

¹⁴⁴ PJM Tariff, pt. IX, subpt. B, GIA Specs (3.0.0); *Id.*, pt. IX, subpt. C, WMPA Schedules A-F (1.0.0).

submission of the interconnection request.¹⁴⁵ The Commission further revised sections 8.1 and 11.3 of the *pro forma* LGIP to require interconnection customers to provide evidence of 100% site control for the generating facility at the time of execution of the facilities study agreement and when executing, or requesting the unexecuted filing of, the LGIA.¹⁴⁶ The Commission also revised sections 3.4.2 and 11.3 of the *pro forma* LGIP to state that, if an interconnection customer cannot demonstrate the requisite level of site control at the relevant milestone of the interconnection process, its interconnection request will be deemed withdrawn and it could be subject to withdrawal penalties under certain circumstances.

75. The Commission required a transmission provider to establish per-MW acreage requirements for each generating facility technology type and to publicly post these acreage requirements.¹⁴⁷ The Commission modified the *pro forma* LGIP and *pro forma* LGIA definitions of “generating facility” and “generating facility capacity” to clarify that these definitions include hybrid generating facilities, and stated that a transmission provider’s per-MW acreage requirements for each generating facility technology-type must include specific requirements for hybrid generating facilities.¹⁴⁸

a. First Compliance Order

76. In the First Compliance Order, the Commission directed PJM to adopt the *pro forma* LGIP and *pro forma* LGIA definition of “generating facility capacity” or further justify its proposal under the independent entity variation standard.¹⁴⁹ Additionally, the Commission directed PJM to incorporate the requirement in Order No. 2023 for PJM to publicly post acreage requirements for each generating facility technology type or justify the omission of these requirements under the independent entity variation standard.¹⁵⁰

¹⁴⁵ Order No. 2023, 184 FERC ¶ 61,054 at P 594; *see also pro forma* LGIP § 3.4.2.

¹⁴⁶ Order No. 2023, 184 FERC ¶ 61,054 at P 594; *see also pro forma* LGIP §§ 8.1, 11.3.

¹⁴⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 595; *see also pro forma* LGIP §§ 3.4.2, 11.3.

¹⁴⁸ Order No. 2023, 184 FERC ¶ 61,054 at P 603; *see also pro forma* LGIP § 1; *see also pro forma* LGIA art. 1.

¹⁴⁹ First Compliance Order, 192 FERC ¶ 61,077 at P 163.

¹⁵⁰ *Id.* P 165

b. Second Compliance Filing

77. PJM seeks an independent entity variation to use the term “Maximum Facility Output” to satisfy the directive for it to adopt a defined term “generating facility capacity.” PJM states that it defines “maximum facility output” in relevant part as “the maximum (not nominal) net electrical power output in megawatts, specified in the Generation Interconnection Agreement, after supply of any parasitic or host facility loads, that a Generation Project Developer’s Generating Facility is expected to produce....”¹⁵¹ PJM argues that, given the expansive nature of the term Maximum Facility Output, it captures the “aggregate net capacity of the generating facility” requirement contemplated in the definition of generating facility capacity.¹⁵²

78. PJM proposes revisions to its Tariff, Part VIII, Subpart A, section 402(A)(3) to incorporate the Order No. 2023 requirement for PJM to publicly post the required site acreages for the resource-specific technology and MWs requested. Specifically, PJM has revised its Tariff to provide that its acreage requirements are posted in Manual 14H and on its website.¹⁵³

c. Commission Determination

79. We grant PJM’s request for an independent entity variation to use its existing Tariff definition for “Maximum Facility Output” to satisfy the Commission’s directive to incorporate the *pro forma* LGIP and *pro forma* LGIA term “generating facility capacity.” We find that PJM’s definition for “Maximum Facility Output” is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A because, consistent with both the *pro forma* LGIP and *pro forma* LGIA definitions of “generating facility capacity” and the Commission’s directive in the First Compliance Order, it incorporates the concept of net capacity of a generating facility.¹⁵⁴

80. We also find that PJM’s proposed Tariff revisions concerning the site control reforms comply with the requirements of Order Nos. 2023 and 2023-A. Specifically, we find that PJM’s Tariff revisions that reference acreage requirements and cite

¹⁵¹ Second Compliance Filing at 19; PJM Tariff, pt. VIII, subpt. A, § 400M (0.1.0).

¹⁵² Second Compliance Filing at 19-20.

¹⁵³ *Id.* at 18-19; PJM Tariff, pt. VIII, subpt. A, § 402 (3.0.0), § 402(A)(3).

¹⁵⁴ Order No. 2023, 184 FERC ¶ 61,054 at P 192; *see also pro forma* LGIP § 1; *pro forma* LGIA art. 1. *See also* First Compliance Order, 192 FERC ¶ 61,077 at P 147.

Manual 14H, in which PJM details the site control requirement by technology type, comply with the directive in the First Compliance Order.¹⁵⁵

7. Elimination of Reasonable Efforts and Study Delay Penalties

81. In Order No. 2023, the Commission revised sections 2.2 (Comparability), 3.5.4, 7.4, 8.3 (Interconnection Facilities Study Procedures), and Attachment A to Appendix 3 (formerly Appendix 4) of the *pro forma* LGIP to eliminate the reasonable efforts standard for conducting cluster studies, cluster restudies, facilities studies, and affected system studies by the tariff-specified deadlines.¹⁵⁶ The Commission added new section 3.9 (Penalties for Failure to Meet Study Deadlines) to the *pro forma* LGIP to implement a structure of study delay penalties.¹⁵⁷ Specifically, delays of cluster studies beyond the tariff-specified deadline will incur a penalty of \$1,000 per business day; delays of cluster restudies beyond the tariff-specified deadline will incur a penalty of \$2,000 per business day; delays of affected system studies beyond the tariff-specified deadline will incur a penalty of \$2,000 per business day; and delays of facilities studies beyond the tariff-specified deadline will incur a penalty of \$2,500 per business day. The Commission explained that, among other things, these penalty amounts are intended to incentivize transmission providers to meet study deadlines and that the structure of increasing penalties reflects the progressively greater harm caused by delayed studies at later interconnection stages.¹⁵⁸

82. The Commission also specified that the study delay penalty regime contains the following safeguards for transmission providers: (1) no study delay penalties will be assessed until the third cluster study cycle (including any transitional cluster study cycle, but not transitional serial studies) after the Commission-approved effective date of the transmission provider's filing in compliance with Order No. 2023; (2) there will be a 10-business day grace period, such that no study delay penalties will be assessed for a study that is delayed by 10 business days or fewer; (3) deadlines may be extended for a particular study by 30 business days by mutual agreement of the transmission provider and all interconnection customers with interconnection requests in the relevant study; (4) study delay penalties will be capped at 100% of the initial study deposits received for all of the interconnection requests in the relevant study; and (5) transmission providers will have the ability to appeal any study delay penalties to the Commission, with the

¹⁵⁵ First Compliance Order, 192 FERC ¶ 61,077 at P 165.

¹⁵⁶ Order No. 2023, 184 FERC ¶ 61,054 at P 962; *see also pro forma* LGIP §§ 2.2, 3.5.4, 7.4, 8.3; *pro forma* LGIP, app. 3, attach. A.

¹⁵⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 962; *see also pro forma* LGIP § 3.9.

¹⁵⁸ Order No. 2023, 184 FERC ¶ 61,054 at PP 974-978.

Commission determining whether good cause exists to grant the relief requested on appeal.¹⁵⁹

83. The Commission further provided the following features to the study delay penalty structure: (1) transmission providers must distribute study delay penalties to interconnection customers in the relevant study that did not withdraw, or were not deemed withdrawn, from the interconnection queue before the missed study deadline on a pro rata per interconnection request basis to offset their study costs; (2) non-RTO/ISO transmission providers and transmission-owning members of RTOs/ISOs may not recover study delay penalties through transmission rates; (3) RTOs/ISOs may submit an Federal Power Act (FPA) section 205 filing to propose a default structure for recovering study delay penalties and/or to recover the costs of any specific study delay penalties;¹⁶⁰ and (4) transmission providers must post quarterly on their OASIS or other publicly accessible website (a) the total amount of study delay penalties from the previous reporting quarter and (b) the highest study delay penalty paid to a single interconnection customer in the previous reporting quarter.¹⁶¹ In Order No. 2023-A, the Commission clarified that study delay penalties would be allocated to interconnection customers on a pro rata basis proportionate to each interconnection customer's final study cost in the relevant study.¹⁶²

a. First Compliance Order

84. In the First Compliance Order, the Commission found that PJM did not comply with the elimination of reasonable efforts requirement of Order Nos. 2023 and 2023-A. The Commission also found that PJM's conceptual proposal did not comply with the study delay penalties requirements in Order Nos. 2023 and 2023-A because PJM did not propose any Tariff revisions in eTariff related to these requirements.¹⁶³ Accordingly, the Commission directed PJM to submit a further compliance filing that eliminates the

¹⁵⁹ *Id.* P 972.

¹⁶⁰ The typical standard of review under FPA section 205 would apply to these filings, i.e., the filer must show that any proposal to recover study delay penalties is just, reasonable, and not unduly discriminatory or preferential. *See* 16 U.S.C. § 824d.

¹⁶¹ Order No. 2023, 184 FERC ¶ 61,054 at P 963.

¹⁶² Order No. 2023-A, 186 FERC ¶ 61,199 at P 439.

¹⁶³ First Compliance Order, 192 FERC ¶ 61,077 at P 11.

reasonable efforts standard and proposes study delay penalties in accordance with Order Nos. 2023 and 2023-A in PJM's Tariff.¹⁶⁴

b. Second Compliance Filing

85. PJM proposes revisions to remove the terms “use Reasonable Efforts,” “exercise Reasonable Efforts,” or the like from Part VIII of its Tariff in compliance with the elimination of reasonable efforts standard in Order Nos. 2023 and 2023-A and the Commission's directives in the First Compliance Order.¹⁶⁵ PJM also explains that it proposes to remove the “reasonable efforts” language from its Tariff, Part VIII, Subpart B, section 403(B) regarding PJM's informing interconnection customers of any deficiencies in their interconnection request.¹⁶⁶ Specifically, PJM proposes Tariff revisions that remove the terms “use Reasonable Efforts” or the like for conducting cluster studies, cluster restudies, facilities studies, and affected system studies, as required by Order No. 2023.¹⁶⁷

86. PJM also proposes new Tariff provisions to incorporate the *pro forma* LGIP's study delay penalties provisions, with penalties applying to Phase I system impact studies, Phase II system impact studies, Phase III system impact studies, and affected system impact studies.¹⁶⁸ Specifically, PJM proposes penalties of \$1,000 per business day for delays of Phase I System Impact Studies, \$2,000 per business day for delays of Phase II and Phase III System Impact Studies; and \$2,000 per business day for delays of Affected System Studies beyond the applicable deadlines set forth in Part VIII of PJM's Tariff.¹⁶⁹

87. PJM proposes Tariff provisions that specify that the penalty regime set forth in section 438 of its proposed Tariff revisions shall not be implemented until the start of studies for the third Cycle after the Commission-approved effective date of transmission provider's compliance filing.¹⁷⁰ As discussed further below in the Effective Date section

¹⁶⁴ *Id.* P 222.

¹⁶⁵ Second Compliance Filing at 21.

¹⁶⁶ *Id.* at 10-11; PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0), § 403(B).

¹⁶⁷ *See* Order No. 2023, 184 FERC ¶ 61,054 at P 965.

¹⁶⁸ Second Compliance Filing at 22.

¹⁶⁹ PJM Tariff, pt. VIII, subpt. K, § 438 (0.0.0), § 438(B).

¹⁷⁰ *Id.* § 438(F).

of this order, PJM also requests that the Tariff revisions to eliminate reasonable efforts and for study delay penalties become effective at the commencement of the third Cycle after the Commission establishes the effective date for PJM's Order No. 2023 compliance filings.¹⁷¹ Specifically, PJM requests an indefinite date for these Tariff revisions and asserts that once the commencement date of the appropriate Cycle is known, PJM will make a filing no more than 120 days and no less than 60 days before that date to establish the effective date.¹⁷²

88. PJM proposes to adopt the *pro forma* LGIP provision that provides for a grace period during which no penalty will be assessed when a study is delayed by 10 business days or less.¹⁷³ PJM also proposes that if a study is delayed by more than 10 business days, the penalty amount will be calculated from the first business day the transmission provider misses the applicable study deadline.

89. PJM requests an independent entity variation regarding its study delay penalties, proposing that if its Phase I and II studies are delayed due to a transmission owner or neighboring transmission provider, PJM may unilaterally extend the deadline, up to 30 calendar days. In such cases, PJM will only be assessed a penalty for delays based on the period after the 30-day extension. PJM states that, although the Commission in Order No. 2023-A noted that "'self-effectuating' exceptions to study delay penalties where a delay is caused by factors outside of the control of the transmission provider is not a preferable approach to the appeals process,"¹⁷⁴ PJM requests such a self-effectuating exception in light of the multiple other transmission providers and transmission owners with which PJM must interact and from which it must receive information during the interconnection study process.¹⁷⁵ PJM asserts that its proposal aligns with the Commission's goals of efficiency and expediency and that such treatment is consistent with how PJM administers the overall study process and communicates study results to interconnection customers.¹⁷⁶

¹⁷¹ Second Compliance Filing at 48.

¹⁷² We address PJM's requested effective dates for its proposed Tariff revisions below in section IV.B.15.

¹⁷³ PJM Tariff, pt. VIII, subpt. K, § 438 (0.0.0), § 438(D).

¹⁷⁴ Second Compliance Filing at 24 (quoting Order No. 2023-A, 186 FERC ¶ 61,199 at P 369).

¹⁷⁵ PJM Tariff, pt. VIII, subpt. K, § 438 (0.0.0), § 438(E).

¹⁷⁶ Second Compliance Filing at 22-23.

90. PJM proposes to cap study delay penalties at 100% of the initial study deposit(s) received for all of the interconnection requests in the Cycle; and (2) 100% of the study deposit(s) that PJM collects for conducting the affected system study.¹⁷⁷

91. PJM also proposes to adopt the *pro forma* LGIP provision that the transmission provider be allowed to appeal any penalties imposed under its proposed Tariff section 438 within 45 days of completion of the late study.¹⁷⁸ PJM proposes to adopt the *pro forma* LGIP provision that the Commission may excuse the transmission provider from the penalty for good cause, and that while the appeal is pending, the transmission provider remains liable for the penalty, but does not need to distribute the penalty until 45 days after either the deadline for filing a rehearing request has ended, if no requests for rehearing of the appeal have been filed, or the date that any requests for rehearing of the Commission's decision on the appeal are no longer pending before the Commission.

92. PJM also requests an independent entity variation to permit it to pay any study delay penalties it incurs from the non-refundable portion (i.e., 10%) of the study deposits it collects from interconnection customers in a Cycle.¹⁷⁹ PJM notes that in Order No. 2023, the Commission provided that RTOs/ISOs may submit an FPA section 205 filing to propose a default structure for recovering study delay penalties.¹⁸⁰ PJM asserts that its proposal to implement in the Tariff a default funding mechanism to pay for any study delay penalties it incurs from non-refundable study deposit amounts constitutes the kind of RTO funding of study delay penalties that Order No. 2023 contemplated, as it will avoid the administrative burden PJM would incur if it had to identify exactly who caused the study delay and therefore should be responsible for paying it.

c. Protests

93. Shell Companies protest PJM's independent entity variation request for a unilateral extension of study deadlines if its interconnection studies are delayed by

¹⁷⁷ See *pro forma* LGIP § 3.9.

¹⁷⁸ PJM Tariff, pt. VIII, subpt. K, § 438 (0.0.0), § 438(C).

¹⁷⁹ *Id.* § 438(H). In the First Compliance Order, the Commission accepted PJM's proposal that 10% of the study deposit are non-refundable, which PJM adopted instead of the \$5,000 application fee the Commission adopted in Order No. 2023. See *pro forma* LGIP § 3.1.1.1; Order No. 2023-A, 186 FERC ¶ 61,199 at P 189. PJM's study deposit amounts range from \$75,000 to \$400,000 based on MW size of the generating facility.

¹⁸⁰ Second Compliance Filing at 22-23 (citing Order No. 2023, 184 FERC ¶ 61,054 at P 994).

affected system studies performed by other transmission providers or facilities studies performed by transmission owners.¹⁸¹ Shell Companies argue that PJM's unilateral extension proposal would allow PJM to extend the study deadlines before penalties are applicable. Shell Companies assert that Order No. 2023 seeks to incentivize transmission providers to meet interconnection study deadlines by establishing firm deadlines and specific penalties for missing deadlines, and they argue that PJM's unilateral extension proposal would once again render those deadlines uncertain and changeable, making planning by interconnection customers more difficult, and diminishing the incentives the Commission has established.

94. Shell Companies also argue that, outside of a generalized argument surrounding PJM's administrative ease, PJM does not justify in its compliance filing why it is proposing to pay PJM's study penalties from the non-refundable portion of the study deposits it collects from interconnection customers.¹⁸² Shell Companies argue that PJM's proposal to pay study delay penalties from the non-refundable portion of the study deposits unfairly penalizes interconnection customers and eliminates the very incentives that the Commission seeks to create through the study delay penalties.¹⁸³

95. Clean Energy Associations and Public Interest Organizations¹⁸⁴ argue that PJM should clarify how transmission owners will pay study delay penalties when the 10% non-refundable portion of study deposits is exhausted.¹⁸⁵ Clean Energy Associations argue that it is critical that PJM clarify that the transmission owners remain responsible for the full amount of any applicable study delay penalties, even if the non-refundable portion of the study deposit has been exhausted.¹⁸⁶ Public Interest Organizations further explain that PJM's proposed Tariff could be read to indicate that no other funding source

¹⁸¹ Shell Companies Protest at 15-16.

¹⁸² *Id.* at 16.

¹⁸³ *Id.* at 17.

¹⁸⁴ Public Interest Organizations refers to Sierra Club and Natural Resources Defense Council.

¹⁸⁵ Clean Energy Associations Protest at 11-12; *see also* Public Interest Organizations Protest at 4-6.

¹⁸⁶ Clean Energy Associations Protest at 12 (citing *pro forma* LGIP § 3.9).

for study delay penalties exists and argue that it is critical that PJM can pay for the total penalties it may owe.¹⁸⁷

d. Answers

96. PJM disputes Shell Companies' assertion that PJM's proposal extends the study deadlines by which penalties are applicable.¹⁸⁸ PJM reiterates that its requested independent entity variation related to the 30-day deadline extension is "intended to align the penalty regime with PJM's Cycle process in a manner that makes sense."¹⁸⁹ PJM argues that requiring PJM to count studies performed outside of its control places an undue burden on PJM to police other transmission providers and asserts that such a burden was not contemplated by Order Nos. 2023 and 2023-A.¹⁹⁰

97. PJM further argues that there will be no practical effect to interconnection customers in the current Cycle of PJM's proposal to pay study penalties from the non-refundable portion of collected study deposits, because PJM asserts that it is a fund containing non-refundable deposits forfeited by projects in earlier Cycles that will have been accumulating for several years by the time the penalty regime takes effect.¹⁹¹ PJM asserts that it anticipates it will not have to pay significant penalty amounts as PJM has made significant efforts to innovate and leverage technology to expedite its interconnection process.¹⁹² PJM states that under the Transition Cycle rules, PJM has completed its system impact studies ahead of the 180-day deadline, with one exception in which PJM completed the study in 182 days.¹⁹³ PJM asserts that its proposal "make[s]

¹⁸⁷ Public Interest Organizations Protest at 4-5.

¹⁸⁸ PJM Answer at 16.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ *Id.* at 16-17.

¹⁹² *Id.* at 17.

¹⁹³ *Id.* (citing *PJM Interconnection, L.L.C.*, Informational Report on the Processing of New Service Requests Under the Transition Period Rules, Docket No. ER22-2110-000, attach. A at 1 (filed Aug. 14, 2025)).

use of the type of default mechanism the Commission expressly permitted transmission providers to adopt.”¹⁹⁴

e. **Commission Determination**

98. We find that PJM’s proposed Tariff revisions to eliminate the reasonable efforts standard partially comply with the Commission’s directives in the First Compliance Order to submit a compliance filing that eliminates the reasonable efforts standard. We find that PJM’s proposed revisions to remove instances of “use Reasonable Efforts” and “exercise Reasonable Efforts” in PJM’s Tariff, Part VIII comply with the Commission’s directives. However, we find that the PJM Tariff, Part VIII, Subpart B, section 403(B)(3) provisions that allow the application review period to extend for either 90 days “or the amount of time it takes to complete all Application review activities for the relevant Cycle, whichever is greater” does not comply with the directive in First Compliance Order or the requirement in Order Nos. 2023 and 2023-A to eliminate the reasonable efforts standard because the Tariff provision permits an uncertain extension of the application review period. Accordingly, we direct PJM to submit a further compliance filing within 60 days of the date of this order that removes from its Tariff, Part VIII, Subpart B, section 403(B)(3) the phrase “or the amount of time it takes to complete all Application review activities for the relevant Cycle, whichever is greater,” or justifies its proposal under the independent entity variation standard.

99. We accept PJM’s proposed Tariff sections 438(B), 438(C), 438(D), and 438(F) because PJM’s proposed Tariff provisions are consistent with *pro forma* LGIP sections 3.9(2), 3.9(3), 3.9(4), and 3.9(6), respectively. We reject PJM’s requested independent entity variation to unilaterally extend study deadlines (for up to 30 calendar days) because we find that the proposal does not accomplish the purposes of Order Nos. 2023 and 2023-A. The Commission, in Order No. 2023, found that adopting firm study deadlines and penalties is “needed to remedy unjust and unreasonable rates and ensure that interconnection customers are able to interconnect to the transmission system in a reliable, efficient, transparent, and timely manner.”¹⁹⁵ Additionally, Order No. 2023 effectively eliminates the ability of transmission providers to unilaterally grant themselves extensions as to the deadline for facilities studies, but provides other avenues for relief in the form of the safeguards adopted in Order No. 2023.¹⁹⁶ The Commission also adopted *pro forma* LGIP section 3.9(5), which allows study deadline extensions by up to 30 business days if the transmission provider has mutual agreement of all interconnection customers in the study and found that the reform would promote

¹⁹⁴ *Id.* (citing Order No. 2023, 184 FERC ¶ 61,054 at P 1017).

¹⁹⁵ Order No. 2023, 184 FERC ¶ 61,054 at P 968.

¹⁹⁶ Order No. 2023-A, 186 FERC ¶ 61,199 at P 316 n.549.

cooperation between transmission providers and interconnection customers and incentivize transmission providers to keep customers informed of the status of study processes.¹⁹⁷ Outside of PJM's assertion that it cannot receive mutual agreement with interconnection customers to extend study deadlines "given the fact that PJM processes more interconnection requests than most other transmission providers ... [and] has many parties with which it needs to interact in the study process," we find that PJM has not justified why its proposal accomplishes the purposes of Order Nos. 2023 and 2023-A, as the Commission already considered the potential difficulty to transmission providers in larger regions.¹⁹⁸ In Order No. 2023-A, the Commission explained that "[w]e are not persuaded by speculation that interconnection customers will adopt an unreasonably adversarial approach to requests for modest extensions to study deadlines."¹⁹⁹ We find that PJM does not provide any justification supporting its assumption that it cannot achieve mutual agreement with interconnection customers for a study deadline extension, and why adopting the *pro forma* LGIP study extension by mutual agreement will require PJM to file numerous appeals. Additionally, we note that Order No. 2023 provides that if an interconnection study is delayed, and mutual agreement cannot be obtained, the transmission provider will assess the corresponding study delay penalties and may file an appeal with the Commission to explain any relevant circumstances.²⁰⁰ Given the above, we direct PJM to submit a further compliance filing within 60 days of the date of this order that removes the proposed Tariff provisions that allow PJM to unilaterally extend study timelines.

100. Regarding PJM's proposal to pay study delay penalties from the non-refundable portion (10%) of the study deposits collected from interconnection customers, we find that the independent entity variation request is outside the scope of this Order No. 2023

¹⁹⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 982.

¹⁹⁸ *Id.* P 983 ("In response to commenters that argue that it will be difficult to obtain mutual agreement in large regions, we do not view that as a reason to decline to adopt or to modify the proposal. If an interconnection study is delayed, and mutual agreement cannot be obtained, the transmission provider will be assessed the corresponding study delay penalties and may file an appeal with the Commission to explain any relevant circumstances.").

¹⁹⁹ Order No. 2023-A, 186 FERC ¶ 61,199 at P 335 (explaining that interconnection customers are not well served by refusing to accede to a transmission provider's reasonable request for extension because interconnection customers have an interest in reliable interconnection studies and because there may be circumstances where a modest extension may ultimately save time).

²⁰⁰ Order No. 2023, 184 FERC ¶ 61,054 at P 983.

compliance proceeding. Order No. 2023 established a limit on paying study delay penalties (that the total amount of penalties paid to one cluster could not exceed the total amount of study deposits provided by that cluster) but did not establish a requirement for transmission providers to identify the source from which study delay penalties are paid.²⁰¹ Instead, the Commission in Order No. 2023 stated that RTOs/ISOs may “submit an FPA section 205 filing to propose a default structure for recovering study delay penalties.”²⁰² As such, we find that the proper vehicle for PJM to submit its proposal to pay study delay penalties from the non-refundable portion of study deposits is through an FPA section 205 filing, and we therefore reject PJM’s proposal as outside of scope of this compliance proceeding. Accordingly, we direct PJM to submit a further compliance filing within 60 days of the date of this order that removes these proposed Tariff provisions. This determination is without prejudice to PJM proposing this additional language in a future FPA section 205 filing.

8. Affected System Study Process and Modeling Requirements

101. In Order No. 2023, the Commission adopted an affected system study process and added several related definitions to the *pro forma* LGIP.²⁰³

102. The Commission revised section 3.6 (Coordination with Affected Systems) and adopted section 3.6.1 (Initial Notification) of the *pro forma* LGIP, which requires the transmission provider to notify the affected system operator within 10 business days of the first instance of an identified potential affected system impact, which may occur at the completion of either the cluster study or the cluster restudy.²⁰⁴

103. The Commission also adopted several requirements to establish an affected system process under *pro forma* LGIP section 9 (Affected System Study), which pursuant to *pro forma* LGIP section 9.1 (Applicability) applies to the transmission provider when it is acting as the affected system transmission provider (i.e., when the transmission provider is studying the impacts on its own transmission system of proposed interconnections to other transmission providers’ transmission systems).²⁰⁵ First, the Commission adopted section 9.2 (Response to Initial Notification) of the *pro forma* LGIP, which requires the

²⁰¹ See *id.* P 972.

²⁰² *Id.* P 994.

²⁰³ *Id.* PP 1110, 1112; see also *pro forma* LGIP § 1.

²⁰⁴ Order No. 2023, 184 FERC ¶ 61,054 at P 1119; see also *pro forma* LGIP §§ 3.6, 3.6.1.

²⁰⁵ Order No. 2023, 184 FERC ¶ 61,054 at P 1113; see also *pro forma* LGIP § 9.1.

affected system transmission provider to respond to notification of a potential affected system impact in writing within 20 business days, indicating whether it intends to conduct an affected system study.²⁰⁶ Section 9.2 also requires that, within 15 business days of the affected system transmission provider's affirmative response of its intent to conduct an affected system study, the affected system transmission provider must share a non-binding good faith estimate of the cost and schedule to complete the affected system study.

104. The Commission next adopted section 9.3 (Affected System Queue Position) of the *pro forma* LGIP.²⁰⁷ Under section 9.3, the interconnection requests of affected system interconnection customers that have executed an affected system study agreement will be higher-queued than the interconnection requests of those host system interconnection customers that have not yet received their cluster study results, and lower-queued than those interconnection customers that have already received their cluster study results. All affected system interconnection requests studied within the same affected system cluster will be equally queued.

105. The Commission next adopted section 9.4 (Affected System Study Agreement/Multiparty Affected System Study Agreement) of the *pro forma* LGIP to require that the transmission provider tender the affected system study agreement within 10 business days of sharing the schedule for the study with the affected system interconnection customers.²⁰⁸ Section 9.4 also requires the affected system interconnection customer to compensate the affected system transmission provider for the actual costs of the affected system study, and the difference between the affected system study deposit and actual cost of the affected system study will be detailed in an invoice and paid by or refunded to the affected system interconnection customer within 30 calendar days of the receipt of such invoice.²⁰⁹ An affected system interconnection customer's failure to pay the difference between these amounts will result in loss of that affected system interconnection customer's affected system queue position. Section 9.4 also requires that the affected system transmission provider notify the host transmission provider of the affected system interconnection customer's breach of its obligations under this section, should such breach occur.²¹⁰

²⁰⁶ Order No. 2023, 184 FERC ¶ 61,054 at P 1120; *see also pro forma* LGIP § 9.2.

²⁰⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 1138; *see also pro forma* LGIP § 9.3.

²⁰⁸ Order No. 2023, 184 FERC ¶ 61,054 at P 1154; *see also pro forma* LGIP § 9.4.

²⁰⁹ Order No. 2023, 184 FERC ¶ 61,054 at P 1157.

²¹⁰ *Id.* P 1159.

106. The Commission next adopted section 9.5 (Execution of Affected System Study Agreement/Multiparty Affected System Study Agreement) of the *pro forma* LGIP, which provides the affected system interconnection customer with 10 business days from the date of receipt of the affected system study agreement to execute and deliver it to the affected system transmission provider.²¹¹ Section 9.5 also provides that, if the affected system interconnection customer does not provide all required technical data when it delivers the affected system study agreement, the affected system transmission provider shall notify the affected system interconnection customer of the deficiency within five business days of the receipt of the affected system study agreement, and the affected system interconnection customer has 10 business days to cure the deficiency after receipt of such notice (provided that the deficiency does not include failure to deliver the executed affected system study agreement or deposit).

107. The Commission next adopted section 9.6 (Scope of Affected System Study) of the *pro forma* LGIP, which requires the affected system study to consider the base case as well as all higher-queued generating facilities on the affected system transmission provider's transmission system and to consist of a power flow, stability, and short circuit analysis.²¹² Section 9.6 also requires the affected system study to provide a list of affected system network upgrades that are required because of the affected system interconnection customer's proposed interconnection, a non-binding good faith estimate of cost responsibility, and a non-binding good faith estimated time to construct. The affected system study may consist of a system impact study, a facilities study, or some combination thereof.

108. The Commission next adopted section 9.7 (Affected System Study Procedures) of the *pro forma* LGIP, which requires clustering of affected system interconnection customers for study purposes where multiple interconnection requests that are part of a single cluster in the host system's cluster study process cause the need for an affected system study.²¹³ Section 9.7 also requires the affected system transmission provider to complete the affected system study and provide the affected system interconnection customer with affected system study results within 150 calendar days after receipt of the affected system study agreement. Section 9.7 also requires the affected system transmission provider to provide the affected system study report to the host transmission provider at the same time it provides the report to the affected system interconnection customer. The affected system transmission provider must notify the affected system

²¹¹ *Id.* P 1158; *see also pro forma* LGIP § 9.5.

²¹² Order No. 2023, 184 FERC ¶ 61,054 at P 1160; *see also pro forma* LGIP § 9.6.

²¹³ Order No. 2023, 184 FERC ¶ 61,054 at P 1133; *see also pro forma* LGIP § 9.7.

interconnection customer that an affected system study will be late.²¹⁴ Lastly, *pro forma* LGIP section 9.7 requires affected system transmission providers to study all affected system interconnection requests using Energy Resource Interconnection Service (ERIS)²¹⁵ modeling standards.²¹⁶

109. The Commission added a new section 11.2.1 (Delay in LGIA Execution, or Filing Unexecuted, to Await Affected System Study Report) to the *pro forma* LGIP.²¹⁷ Under this section, if the interconnection customer does not receive its affected system study results before the deadline in its host system for LGIA execution, or the deadline to request that the LGIA be filed unexecuted, the host transmission provider must, at the interconnection customer's request, delay the deadline for the interconnection customer to finalize its LGIA. The interconnection customer will have 30 calendar days after receipt of the affected system study report to execute the LGIA, or request that the LGIA be filed unexecuted. Additionally, if the interconnection customer prefers to proceed to the execution of its LGIA, or request that the LGIA be filed unexecuted, before it has received its affected system study results, it may notify the host transmission provider of its intent to proceed with the execution of the LGIA, or request that the LGIA be filed unexecuted.²¹⁸ If the host transmission provider determines that further delay to the LGIA execution date would cause a material impact on the cost or timing of an equal- or lower-queued interconnection customer, the transmission provider must notify the relevant interconnection customer of such impact and establish that the new deadline is 30 calendar days after such notice is provided.

110. The Commission adopted section 9.8 (Meeting with Transmission Provider) of the *pro forma* LGIP, which requires the affected system transmission provider and the affected system interconnection customer to meet within 10 business days of the affected

²¹⁴ Order No. 2023, 184 FERC ¶ 61,054 at P 1135.

²¹⁵ ERIS is an interconnection service that allows the interconnection customer to connect its generating facility to the transmission provider's transmission system to be eligible to deliver the generating facility's electric output using the existing firm or non-firm capacity of the transmission provider's transmission system on an as available basis. ERIS in and of itself does not convey transmission service. *Pro forma* LGIP § 1.

²¹⁶ Order No. 2023, 184 FERC ¶ 61,054 at P 1276.

²¹⁷ *Id.* P 1123; *see also pro forma* LGIP § 11.2.1.

²¹⁸ Order No. 2023, 184 FERC ¶ 61,054 at P 1124.

system transmission provider tendering the affected system study report to the affected system interconnection customer.²¹⁹

111. The Commission adopted section 9.9 (Affected System Cost Allocation) of the *pro forma* LGIP, which requires the allocation of affected system network upgrade costs using a proportional impact method in accordance with *pro forma* LGIP section 4.2.1(1)(b).²²⁰

112. The Commission adopted section 9.10 (Tender of Affected System Facilities Construction Agreement/Multiparty Affected System Facilities Construction Agreement) of the *pro forma* LGIP.²²¹ Under section 9.10, an affected system transmission provider must tender an affected system facilities construction agreement to the affected system interconnection customer within 30 calendar days of providing the affected system study report. The affected system transmission provider must provide 10 business days after receipt of the affected system facilities construction agreement for the affected system interconnection customer to execute the agreement or have the affected system transmission provider file it unexecuted with the Commission.

113. The Commission adopted section 9.11 (Restudy) of the *pro forma* LGIP to include a maximum 60-calendar day restudy period for any affected system restudies.²²² Section 9.11 also adopts a 30-calendar day notification requirement for the affected system transmission provider to notify the affected system interconnection customer of the need for affected system restudy upon discovery of such need.²²³

114. In Order No. 2023-A, the Commission clarified that an affected system transmission provider may pause an affected system study that is planned or in progress if the relevant host transmission provider decides to conduct a cluster restudy. The Commission added *pro forma* LGIP: (1) section 3.6.2 (Notification of Cluster Restudy) to require the host transmission provider to notify any relevant affected system operators of a cluster restudy at the same time it notifies the interconnection customers in the cluster restudy; and (2) section 3.6.3 (Notification of Cluster Restudy Completion) to require the host transmission provider to notify the affected system operator of the completion of the cluster restudy and of a potential affected system impact caused by an

²¹⁹ *Id.* P 1169; *see also pro forma* LGIP § 9.8.

²²⁰ Order No. 2023, 184 FERC ¶ 61,054 at P 1149; *see also pro forma* LGIP § 9.9.

²²¹ Order No. 2023, 184 FERC ¶ 61,054 at P 1165; *see also pro forma* LGIP § 9.10.

²²² Order No. 2023, 184 FERC ¶ 61,054 at P 1170; *see also pro forma* LGIP § 9.11.

²²³ Order No. 2023, 184 FERC ¶ 61,054 at P 1171.

interconnection request within 10 business days of the completion of the cluster restudy.²²⁴

115. The Commission also added *pro forma* LGIP section 9.2.2 (Response to Notification of Cluster Restudy) to allow the affected system transmission provider five business days from receiving notification of the cluster restudy to send a written notification to the relevant affected system interconnection customers and the host transmission provider if it intends to delay commencement or completion of a planned or in-progress affected system study until after the completion of the cluster restudy.²²⁵ The Commission revised *pro forma* LGIP section 9.5 to remove the requirement for an affected system interconnection customer to execute and return its previously received affected system study agreement and submit its affected system study deposit if the affected system transmission provider decides to delay the affected system study, pursuant to *pro forma* LGIP section 9.2.2.²²⁶

a. First Compliance Order

116. In the First Compliance Order, the Commission directed PJM to submit a compliance filing that includes Tariff revisions adopting the affected system study process and modeling requirements of Order Nos. 2023 and 2023-A.²²⁷ The Commission also declined PJM's request for guidance on PJM's conceptual proposal, because PJM had not filed any proposed Tariff revisions and, therefore, the Commission believed it was premature to address any potential, future Tariff provisions.²²⁸

b. Second Compliance Filing

117. PJM proposes to adopt, with modifications, some of the affected system study-related definitions that the Commission adopted in Order Nos. 2023 and 2023-A.²²⁹

²²⁴ Order No. 2023-A, 186 FERC ¶ 61,199 at PP 498, 500; *see also pro forma* LGIP §§ 3.6.2, 3.6.3.

²²⁵ Order No. 2023-A, 186 FERC ¶ 61,199 at P 498; *see also pro forma* LGIP § 9.2.2.

²²⁶ Order No. 2023-A, 186 FERC ¶ 61,199 at P 499; *see also pro forma* LGIP § 9.5.

²²⁷ First Compliance Order, 192 FERC ¶ 61,077 at P 264.

²²⁸ *Id.* P 264.

²²⁹ *See* PJM Tariff, pt. VIII, subpt. A, § 400A (Definitions A) (3.0.0), Affected System Facilities Study, Affected System Facilities Study Deposit, Affected System

118. PJM states that it proposes revisions to its Tariff, Part VIII, Subpart G, section 434 that adopt Order Nos. 2023 and 2023-A's required affected system study process with PJM-specific modifications. PJM states that its proposed revisions supplement PJM's existing affected system coordination rules, which already cover situations when PJM is the host transmission provider and new service requests may affect other transmission providers, as well as situations when PJM is the affected system.²³⁰ PJM states it added provisions from the Commission's *pro forma* LGIP for (1) initial screening by the host transmission provider consistent with *pro forma* LGIP sections 3.6 and 3.6.1;²³¹ (2) notification by the affected system that it intends to study interconnection requests on the host transmission provider's transmission system consistent with *pro forma* LGIP section 9.2;²³² (3) tendering of an Affected System Customer Impact Study Agreement consistent with *pro forma* section 9.4;²³³ (4) affected system customer execution of that agreement and provision of the required affected system impact study deposit, as well as the consequences of failure to do so consistent with *pro forma* LGIP section 9.5;²³⁴ and (5) the assignment of an affected system queue position consistent with *pro forma* LGIP section 9.3.²³⁵ Additionally, PJM states it has adopted the *pro forma* LGIP's provisions on the conduct of affected system impact studies, including the use of ERIS, clustering, and the proportional impact method for allocating the cost of affected system network upgrades.²³⁶

119. PJM explains it has added a requirement to complete the affected system impact study within 120 calendar days after it has received executed Affected System Customer Impact Study Agreements and the required deposits from all affected system customers in

Facilities Study Report, Affected System Impact Study, Affected System Impact Study Deposit, Affected System Impact Study Report, Affected System Network Upgrades, and Affected System Queue Position.

²³⁰ Second Compliance Filing at 26.

²³¹ *Id.* (citing PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0), § 434(A)(1)).

²³² *Id.* (citing PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0), § 434(A)(2)(a-c)).

²³³ *Id.* (citing PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0), § 434(A)(3)).

²³⁴ *Id.* (citing PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0), § 434(B)(3), (3)(a)).

²³⁵ *Id.* (citing PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0), § 434(B)(4)).

²³⁶ *Id.* at 27.

the cluster and specified that if PJM does not meet that deadline, PJM shall be subject to financial penalties as described in section 438.²³⁷

120. PJM makes five independent entity variation requests for affected system study-related provisions.²³⁸ First, PJM states that it requests an independent entity variation to “eschew” certain interim steps or alternatives in the affected system study process. For example, PJM highlights the requirement that PJM, as affected system transmission provider, provide the affected system customer a cost and schedule estimate for the affected system impact study before tendering the Affected System Customer Impact Study Agreement or the provisions concerning an affected system interconnection customer asking PJM to file the Affected System Customer Impact Study Agreement unexecuted.²³⁹ PJM asserts that, given the volume of new service requests and affected system impact studies PJM is responsible for processing, there is not sufficient time to provide estimates in advance of study agreements nor is there time to file Affected System Customer Impact Study Agreements unexecuted.²⁴⁰ Relatedly, PJM states that it also does not propose to include provisions on delays of affected system impact studies where the host transmission provider is restudying the affected system facilities because PJM does not anticipate that a restudy by the host transmission provider will impact PJM’s affected system impact study.²⁴¹

121. Second, PJM requests an independent entity variation to reference the PJM Manuals for affected system study parameter details, rather than enumerating them all in the PJM Tariff, thus avoiding the need to revise the Tariff as affected system study best practices change.²⁴²

122. Third, PJM requests an independent entity variation to add to the use of the ERS modeling standard PJM’s Individual Plant Deliverability Test described in PJM Manual 14B.²⁴³ PJM explains that the Individual Plant Deliverability Test is not as

²³⁷ *Id.* at 28 (citing PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0), § 434(B)(5)(e), (f)).

²³⁸ *Id.* at 26-28.

²³⁹ *Id.* at 26-27.

²⁴⁰ *Id.* at 27.

²⁴¹ *Id.*

²⁴² *Id.*

²⁴³ *Id.* (citing PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0), § 434(B)(5)(d)).

stringent as PJM's Generator Deliverability Test because it involves ramping individual generating facilities rather than ramping all generating facilities simultaneously and, therefore, is not likely to require significant upgrades.²⁴⁴

123. Fourth, PJM requests an independent entity variation to set a separate, 120-calendar-day deadline for the affected system facilities study.²⁴⁵ PJM explains that this proposal is just and reasonable and consistent with the requirements of Order Nos. 2023 and 2023-A because it aligns PJM's process, which features separate affected system impact studies and affected system facilities studies, with the requirements of Order Nos. 2023 and 2023-A. PJM also notes that this independent entity variation would provide a reasonable period of time for transmission owners to perform the affected system facilities study.²⁴⁶

124. Fifth, PJM requests an independent entity variation to allow it to maintain its Joint Operating Agreement with the Midcontinent Independent System Operator, Inc. (MISO) that both PJM and MISO have on-file with the Commission (PJM-MISO JOA).²⁴⁷ PJM explains that its affected system coordination efforts take place under a framework of this bilateral operating agreement and joint reliability coordination agreements with neighboring transmission providers in addition to the PJM Tariff provisions and other transmission providers' open access transmission tariffs. PJM states that the coordinated system planning provisions in Article 9.3 of the PJM-MISO JOA were revised and accepted by the Commission on June 25, 2025.²⁴⁸ PJM notes that the Commission granted MISO's request for an independent entity variation in its compliance proceeding to preserve its existing affected system arrangements and procedures set forth in the PJM-MISO JOA as well as MISO's joint operating agreement with the Southwest Power Pool, Inc. (MISO-SPP JOA). PJM states the Commission found that allowing MISO to preserve its affected systems arrangements in the PJM-MISO JOA, as well as in the MISO-SPP JOA, accomplished the purposes of Order Nos. 2023 and 2023-A by ensuring interconnection customers can interconnect in a

²⁴⁴ *Id.*

²⁴⁵ *Id.* at 28 (citing Order No. 2023, 184 FERC ¶ 61,054 at P 1134).

²⁴⁶ *Id.*

²⁴⁷ *Id.*

²⁴⁸ *Id.* at 28-29 (citing *PJM Interconnection, L.L.C.*, 192 FERC ¶ 61,057 (2025)).

reliable, efficient, and transparent manner.²⁴⁹ PJM argues the Commission should grant PJM's request for an independent entity variation for the same reason.²⁵⁰

125. Finally, PJM proposes numerous revisions to section 434 of its Tariff that provide for the coordination of affected systems.²⁵¹ Specifically, as discussed further below, PJM proposes revisions to section 434(A)(3) to clarify that the affected system customer must provide any required technical data and study deposit to the affected system operator as part of PJM's affected system impact study.²⁵² PJM proposes revisions to section 434(B)(2) that provide for PJM's tendering of an Affected System Customer Impact Study Agreement.²⁵³ PJM proposes revisions to section 434(B)(3)(a) that explain the requirements and provide for the timing of the affected system impact study deposit.²⁵⁴ PJM proposes revisions to sections 434(B)(5)(a-f) that provide for the details and mechanics by which PJM will conduct affected system impact studies.²⁵⁵ PJM proposes revisions to section 434(B)(7) and 434(B)(7)(a) that provide for the details and mechanics by which PJM will conduct affected system customer facilities studies.²⁵⁶

c. Protests

126. Clean Energy Associations state that PJM's request to "eschew" the cost and schedule estimate step for the affected system impact study does not have sufficient justification. Clean Energy Associations state that while PJM justifies its deviation by citing the volume of studies it must process, PJM offers no evidence demonstrating that preparing preliminary estimates is infeasible, nor does it quantify how many studies or staff hours would be affected.²⁵⁷ Clean Energy Associations also argue that PJM's

²⁴⁹ *Id.* at 29 (citing *Midcontinent Indep. Sys. Operator, Inc.*, 191 FERC ¶ 61,229, at PP 217, 237 (2025)).

²⁵⁰ *Id.* at 29.

²⁵¹ See PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0) *passim*.

²⁵² See PJM Tariff, pt. VIII, subpt. G, § 434 (4.0.0), § 434(A)(3).

²⁵³ See *id.* § 434(B)(2).

²⁵⁴ See *id.* § 434(B)(3)(a).

²⁵⁵ See *id.* § 434(B)(5)(a-f).

²⁵⁶ See *id.* § 434(B)(7), (7)(a).

²⁵⁷ Clean Energy Associations Protest at 2-3.

proposed independent entity variation does not accomplish the purposes of Order No. 2023 to reduce uncertainty, promote transparency, and improve queue efficiency.²⁵⁸

127. Similarly, for PJM's independent entity variation request for its Individual Plant Deliverability test, Shell Companies argue that PJM has failed to explain why its Individual Plant Deliverability Test should be applied in the context of affected system studies for the purpose of complying with Order No. 2023. Shell Companies request that PJM's proposal be rejected by the Commission and that, under the Commission's "rule of reason" policy, the Commission should direct PJM to submit the Individual Generator Deliverability Test under FPA section 205.²⁵⁹

128. Clean Energy Associations also protest PJM's independent entity variation request for an additional 120 days for PJM to perform its affected system facilities study. Clean Energy Associations state that PJM offers no empirical evidence justifying why a nearly 100-day delay from the *pro forma* LGIP timeline is necessary. Clean Energy Associations state that, if PJM is granted 240 days to complete affected system studies, in addition to its already-approved 810-day internal cluster study process, the net effect of PJM's proposal would be to protract the interconnection process to roughly 1,050 days, which is nearly double Order No. 2023's *pro forma* framework of 540–630 days.²⁶⁰

d. Answers

129. In response to Clean Energy Associations' arguments about PJM's request to "eschew" cost and schedule estimates prior to the execution of the affected systems impact study agreement, PJM notes that the estimates are only estimates and, as such, are not useful to affected system interconnection customers as validated figures. PJM argues it should not be required to expend time and resources that could, instead, be spent on preparing and conducting studies.

130. In response to Shell Companies' arguments that PJM should include its Individual Plant Deliverability Test within PJM's Tariff given the Commission's rule of reason, PJM explains that its Individual Plant Deliverability test is the functional equivalent of the ERIS modeling standard and is, therefore, within the scope of compliance with Order Nos. 2023 and 2023-A.²⁶¹ PJM notes it uses two tests to measure generator

²⁵⁸ *Id.* at 4 (citing Order No. 2023, 184 FERC ¶ 61,054 at P 1).

²⁵⁹ Shell Companies Protest at 26-27.

²⁶⁰ Clean Energy Associations Protest at 7.

²⁶¹ PJM Answer at 7-8 (citing *pro forma* LGIP § 1 (defining ERIS as "an interconnection service that allows the interconnection customer to connect its generating facility to the . . . transmission system to be eligible to deliver the generating facility's

deliverability: (1) the Generator Deliverability Test to determine if Capacity Resources can be transferred reliably into PJM; and (2) the Individual Plant Deliverability Test, which examines the deliverability of any generation facility (both Capacity Resources and Energy Resources) up to its maximum facility output.²⁶²

e. **Commission Determination**

131. We find that PJM's proposed Tariff revisions partially comply with the affected system study process and modeling requirements of Order Nos. 2023 and 2023-A, as discussed below.

132. We reject PJM's proposed affected system-related terms and their associated definitions because PJM has not justified its proposed variations from the *pro forma* LGIP definitions.²⁶³ While we acknowledge that many of PJM's terms and their associated definitions are similar to or deviate slightly from the defined terms required by Order Nos. 2023 and 2023-A, we note that PJM has not demonstrated whether its defined terms are just and reasonable and not unduly discriminatory or preferential and accomplish the purposes of Order Nos. 2023 and 2023-A. To the extent PJM wishes to maintain its existing terms and their associated definitions for use in its affected systems study process, we remind PJM that it may request an independent entity variation but that the Commission has granted independent entity variations from interconnection-related rulemakings where the RTO/ISO demonstrates that the proposed variation: (1) is just and reasonable and not unduly discriminatory or preferential; and (2) accomplishes the purposes of the order.²⁶⁴ It is not a sufficient justification to state that a variation conforms to current RTO/ISO practices or to the RTO's/ISO's tariff definitions and terminology.²⁶⁵ Accordingly, we direct PJM to submit, within 60 days of the date of this

electric output using the existing firm or non-firm capacity of the transmission provider's transmission system on an as available basis.”)).

²⁶² *Id.* at 8 (citing PJM Interconnection, L.L.C., *PJM Manual 14B: PJM Region Transmission Planning Process*, attach. C.3.1.2. & add. 2 (Dec. 17, 2025), <https://pjm.com/-/media/DotCom/documents/manuals/m14b.pdf> (PJM Manual 14B)).

²⁶³ PJM Tariff, Part VIII, subpt. A, § 400A (Definitions A) (3.0.0).

²⁶⁴ *See, e.g., ISO New Eng., Inc.*, 164 FERC ¶ 61,222 at P 9 (citing Order No. 2003, 104 FERC ¶ 61,103 at PP 26, 827; *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,247 at P 20; *Cal. Indep. Sys. Operator Corp.*, 140 FERC ¶ 61,070 at P 44).

²⁶⁵ *See Cal. Indep. Sys. Operator Corp.*, 170 FERC ¶ 61,112 at P 11; *Sw. Power Pool, Inc.*, 170 FERC ¶ 61,042 at P 14; *ISO New Eng. Inc.*, 170 FERC ¶ 61,209 at P 14; *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,221 at P 18; *PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,226 at P 15.

order, a further compliance filing to either adopt the definitions in section 1 of the *pro forma* LGIP related to the affected system reforms or justify its affected system-related terms and their associated definitions under the independent entity variation standard.

133. We find that some of PJM’s proposed revisions to its Tariff, Part VIII, Subpart G, section 434, which provides for how PJM coordinates and conducts its affected system study processes when PJM is the affected system transmission provider and how PJM’s affected system study processes comport with existing joint operating agreements with other transmission providers, are just and reasonable and not unduly discriminatory or preferential and accomplish the purposes of Order Nos. 2023 and 2023-A.²⁶⁶ As PJM explains, its revisions supplement PJM’s existing affected system rules to incorporate the Commission’s requirements in Order Nos. 2023 and 2023-A for initial screening by the host transmission provider; notification by the affected system that it intends to study interconnection requests on the host transmission provider’s system; tender of an Affected System Customer Impact Study Agreement; affected system customer execution of that agreement and provision of the required affected system impact study deposit, as well as the consequences of failure to do so; and the assignment of an affected system queue position.²⁶⁷ We find that these revisions accomplish the purposes of Order Nos. 2023 and 2023-A because PJM’s provisions will ensure that the affected system study process moves along expediently, providing clarity, cost certainty, and increased transparency.

134. However, we note there are a number of issues related to specific independent entity variation requests and Tariff provisions, as discussed below. First, regarding PJM’s independent entity variation request related to affected system study processes to “eschew certain interim steps or alternatives in the process,” we agree with Clean Energy Associations that PJM has not supported this independent entity variation request.²⁶⁸ More specifically, we find that PJM has failed to explain how its affected systems study process, which omits certain steps, accomplishes the purposes of Order Nos. 2023 and 2023-A. We also note that PJM provides two examples, one of which appears similar to the requirements of *pro forma* LGIP section 9.2, of affected system study process

²⁶⁶ Specifically, we accept PJM’s proposed revisions in the following sections of PJM Tariff, Part VIII, Subpart G: 434(A), 434(A)(1), 434(A)(2), 434(A)(2)(a), 434(A)(4), 434(A)(5), (434)(A)(6), 434(B), 434(B)(1), 434(B)(4), 434(B)(5), 434(B)(5)(b), 434(B)(5)(e), 434(B)(5)(f), 434(B)(6), 434(B)(8), and 434(B)(8)(b)(i).

²⁶⁷ Second Compliance Filing at 26.

²⁶⁸ Clean Energy Associations Protest at 2-3.

requirements it proposes to omit, but PJM does not explain what other steps required in Order Nos. 2023 and 2023-A it is seeking to omit.

135. While we acknowledge PJM's concerns about practicality and sufficient time, we note that Order Nos. 2023 and 2023-A found that the suite of affected system study reforms the Commission adopted in Order Nos. 2023 and 2023-A were intended to ensure that the affected system study process moves along expediently with increased transparency and that while certain steps may increase the need for communication and coordination between affected system transmission providers and interconnection customers, the potential burden of those steps are outweighed by the efficiencies of a standardized, predictable affected system study process.²⁶⁹ Relatedly, we note that PJM's proposed section 434(B)(2) appears similar to the requirements of *pro forma* LGIP section 9.2 (Response to Notifications) which, per Order Nos. 2023 and 2023-A, specify that the transmission provider shall provide a "non-binding good faith estimate of the cost and schedule to complete the Affected System Study."²⁷⁰ PJM's proposed Tariff provisions omit this language as part of PJM's independent entity variation request to omit certain steps or alternatives in the affected system study process, and PJM has not shown how its proposed Tariff provisions accomplish the purposes of Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit, within 60 days of the date of this order, a further compliance filing revising section 434 to adopt the affected system study process requirements in the *pro forma* LGIP (including 9.2 of the *pro forma* LGIP) or justify its proposal to omit specific affected system study process requirements under the independent entity variation standard.

136. Second, regarding PJM's proposed section 434(A)(3), we note this specific Tariff section appears similar to the requirements of *pro forma* LGIP section 9.4 (Affected System Agreement/Multiparty Affected System Study Agreement). We note that compared to the *pro forma* LGIP requirements,²⁷¹ PJM's proposed timeframe relies on the conclusion of another phase in PJM's cyclical interconnection process (the conclusion of Decision Point I of the relevant Cycle). PJM does not explain how relying on that date accomplishes the purposes of Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit, within 60 days of this order, a further compliance filing to either: (1) adopt the requirements of section 9.4 of the *pro forma* LGIP; or (2) justify its proposed variation under the independent entity variation standard.

137. Third, regarding PJM's proposed sections 434(B)(3)(a), 434(B)(7), and 434(B)(7)(a), we note these specific Tariff sections appear similar to the requirements of *pro forma*

²⁶⁹ Order No. 2023, 184 FERC ¶ 61,054 at PP 1110-1111.

²⁷⁰ See *pro forma* LGIP § 9.2.

²⁷¹ See *id.* § 9.4.

LGIP section 9.5 (Execution of Affected System Study Agreement/Multiparty Affected System Study Agreement) and some of the requirements of *pro forma* LGIP section 9.4 (Affected System Agreement/Multiparty Affected System Study Agreement). We note that compared to the *pro forma* LGIP requirements, PJM's proposal omits language providing for an interconnection request deficiency cure period wherein affected system interconnection customers have a window to correct any identified issues with their interconnection requests.²⁷² PJM does not explain how the lack of a deficiency cure period for affected system interconnection customers or PJM's shorter timeframe for an affected system customer to pay affected system impact study costs accomplishes the purposes of Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit, within 60 days of this order, a further compliance filing to either: (1) adopt the requirements of sections 9.4 and 9.5 of the *pro forma* LGIP; or (2) justify its proposed variations under the independent entity variation standard.

138. Fourth, regarding PJM's proposed section 434(B)(5)(a), we note that this specific Tariff section appears similar to the requirements of *pro forma* LGIP section 9.6 (Scope of Affected System Study). We note that compared to the *pro forma* LGIP requirements,²⁷³ PJM's proposed Tariff provisions include language that states PJM will commence studies "[w]hen all relevant Affected System Interconnection Customers have executed an Affected System Customer Impact Study Agreement, provided the associated deposit, and provided all the required technical data." We note that there is not corresponding language in *pro forma* section 9.6, and PJM does not explain how this requirement accomplishes the purposes of Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit, within 60 days of this order, a further compliance filing to either: (1) adopt the requirements of section 9.6 of the *pro forma* LGIP; or (2) justify its proposed variation under the independent entity variation standard.

139. Regarding PJM's independent entity variation request related to affected system study processes to reference the PJM Manuals for study parameter details, we find that PJM has not demonstrated that its proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A. We note that PJM does not specify which PJM Manual contains the affected system study parameter details, nor does PJM explain what *pro forma* LGIP provision this independent entity variation request corresponds with (e.g., *pro forma* LGIP Section 9.6 (Scope of Affected System Study)). Accordingly, we direct PJM to submit, within 60 days of this order, a further compliance filing to either: (1) adopt the

²⁷² See *id.* § 9.5.

²⁷³ See *id.* § 9.6.

requirements of the *pro forma* LGIP; or (2) further justify its proposed variation under the independent entity variation standard.

140. Regarding PJM's independent entity variation request to establish a separate, 120-calendar-day timeframe for the affected system facilities study, we find that PJM has not sufficiently demonstrated that its proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A. Order No. 2023 stated that an affected system study may consist of a system impact study, a facilities study, or a combination of a system impact and facilities study and extended the proposed maximum timeframe to complete an affected system study from the NOPR's proposed 90 calendar days to 150 calendar days. Order No. 2023 further stated that, "we have modified the proposal to provide more time to the transmission provider to conduct such studies that they deem necessary."²⁷⁴ While PJM states that a separate, 120-calendar-day timeframe aligns with PJM's Cycle process and provides a reasonable period of time for transmission owners to perform the affected system facilities study, PJM has not adequately explained why it requires an additional 90 calendar days to conduct its affected system studies (i.e., both PJM's affected system impact study and affected system facilities study) beyond the *pro forma* LGIP's 150 calendar days to perform an affected system study.²⁷⁵ Further, the Commission has stated that it is not a sufficient justification to state that a variation conforms to current RTO/ISO practices or to the RTO's/ISO's tariff definitions and terminology.²⁷⁶ Accordingly, we direct PJM to submit, within 60 days of the date of this order, a further compliance filing revising section 434 either to adopt the affected system study process requirements in *pro forma* LGIP section 9.7 or to further justify its proposal to set a 120-calendar-day timeframe for the affected system facilities study under the independent entity variation standard.

141. Regarding PJM's independent entity variation request to perform an Individual Plant Deliverability test as part of its Affected System Impact Study, we find that PJM's Individual Plant Deliverability test is the functional equivalent of the ERIS modeling standard. PJM explains in its answer that the Individual Plant Deliverability Test is performed for both capacity resources and energy resources and cites to PJM Manual 14B, Addendum 2, which explains that the Individual Plant Deliverability Test "requires that

²⁷⁴ Order No. 2023, 184 FERC ¶ 61,054 at P 1161.

²⁷⁵ *Id.* P 1134 (citing *pro forma* LGIP § 9.7).

²⁷⁶ See *Cal. Indep. Sys. Operator Corp.*, 170 FERC ¶ 61,112, at P 11 (2020); *Sw. Power Pool, Inc.*, 170 FERC ¶ 61,042, at P 14 (2020); *ISO New Eng. Inc.*, 170 FERC ¶ 61,209, at P 14 (2020); *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,221, at P 18 (2019); *PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,226, at P 15 (2019).

each individual generating plant can be ramped up to its seasonal maximum facility output.” Unlike PJM’s Generator Deliverability Test, PJM’s Individual Plant Deliverability Test does not entail an obligation to ensure that the aggregate of generation can be delivered to the aggregate of load in PJM, as capacity resources must. Nor does it require that an energy resource be capable of delivering its full energy output to any specific load on the PJM system. This is consistent with the ERIS modeling standard as described the *pro forma* LGIP adopted in Order No. 2023, which requires the determination of necessary upgrades to allow full output of a Large Generating Facility.²⁷⁷

142. Additionally, in adopting the ERIS requirement for the affected system impact study in *pro forma* LGIP section 9.7, the Commission explained that an NRIS study, compared to an ERIS study, uses stricter modeling standards and that an ERIS standard ensures that network upgrade costs will likely be lower.²⁷⁸ We note that PJM explains that the Individual Plant Deliverability Test is not as stringent as PJM’s Generator Deliverability Test and, therefore, is not likely to require significant upgrades.²⁷⁹ We also note that PJM uses the Individual Plant Deliverability Test for all generator interconnection requests on its own transmission system, consistent with section 9.7 of the *pro forma* LGIP.²⁸⁰ Therefore, we find that PJM’s proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A because PJM proposes to study affected system interconnection customers using its ERIS modeling standard.²⁸¹ In response to Shell Companies, as stated above, we find that the Individual Plant Deliverability test is within the scope of Order No. 2023 compliance because it is the functional equivalent of the ERIS modeling standard in PJM. Further, we find that the details of PJM’s Individual Plant Deliverability Test are implementation details that are appropriately housed in PJM’s Manuals.²⁸²

143. Fifth, regarding PJM’s proposed sections 434(B)(5)(c), 434(B)(5)(d), and 434(B)(7)(b), we note these sections appear similar to the requirements of *pro forma*

²⁷⁷ See *pro forma* LGIP § 3.2.1.2.

²⁷⁸ Order No. 2023, 184 FERC ¶ 61,054 at PP 1277, 1279.

²⁷⁹ Second Compliance Filing at 27.

²⁸⁰ See *pro forma* LGIP § 9.7.

²⁸¹ Order No. 2023, 184 FERC ¶ 61,054 at P 1280.

²⁸² *Hecate Energy Greene Cnty. 3 LLC v. FERC*, 72 F.4th 1307, 1314 (D.C. Cir. 2023) (“even specifiable practices that significantly affect rates need not be included if they are clearly implied by the tariff’s express terms”).

LGIP section 9.7 (Affected System Study Procedures). We note that compared to the *pro forma* LGIP requirements,²⁸³ PJM’s proposed Tariff provisions include language that states PJM will complete the affected system studies after PJM has received “required deposits from all Affected System Customers in the cluster.” We note that there is not corresponding language in *pro forma* LGIP section 9.7, and PJM does not explain how this requirement accomplishes the purposes of Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit, within 60 days of this order, a further compliance filing to either: (1) adopt the requirements of section 9.7 of the *pro forma* LGIP; or (2) justify its proposed variations under the independent entity variation standard.

144. Sixth, regarding PJM’s proposed sections 403(C)(1) and 403(C)(2), we note that these sections appear similar to the requirements of *pro forma* LGIP section 9.8 (Meeting with Transmission Provider). We note that PJM’s proposed Tariff revisions do not include language reflecting Order Nos. 2023 and 2023-A’s requirement that the transmission provider meet with the affected system interconnection customer to discuss the results of the affected system study.²⁸⁴ PJM does not explain how the omission of this requirement accomplishes the purposes of Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit, within 60 days of this order, a further compliance filing to either: (1) adopt the requirements of section 9.8 of the *pro forma* LGIP; or (2) justify its proposed variation under the independent entity variation standard.

145. Finally, we note PJM omits proposed Tariff revisions to adopt the *pro forma* LGIP 11.2.1 (Delay in LGIA Execution, or Filing Unexecuted, to Await Affected System Study Report).²⁸⁵ PJM does not explain how the omission of this requirement accomplishes the purposes of Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit, within 60 days of this order, a further compliance filing to either: (1) adopt the requirements of section 11.2.1 of the *pro forma* LGIP; or (2) justify its proposed variation under the independent entity variation standard.

146. Regarding PJM’s independent entity variation request to allow PJM to maintain the PJM-MISO JOA, we find that PJM’s proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A. Specifically, we grant PJM’s independent entity variation request because the PJM-MISO JOA provides for the details and procedures by which PJM (or MISO) will conduct affected system studies, which we find accomplishes the purposes of Order Nos. 2023 and 2023-A by ensuring that interconnection customers are able to

²⁸³ See *pro forma* LGIP § 9.7.

²⁸⁴ See *id.* § 9.8.

²⁸⁵ See *id.* § 11.2.1.

interconnect to the transmission system in a reliable, efficient, transparent, and timely manner.²⁸⁶

9. Affected System Pro Forma Agreements

147. In Order No. 2023, the Commission adopted several *pro forma* agreements to improve the efficiency and transparency of the interactions among the parties during the affected system study process. The Commission first adopted a *pro forma* affected system study agreement in new Appendix 9 (Two-Party Affected System Study Agreement) of the *pro forma* LGIP and a *pro forma* multiparty affected system study agreement in new Appendix 10 (Multiparty Affected System Study Agreement) of the *pro forma* LGIP.²⁸⁷ These *pro forma* affected system study agreements stipulate how to study the impact of interconnecting generating facilities on an affected system to identify network upgrades needed to accommodate the interconnection request.

148. In Order No. 2023-A, the Commission removed articles 3.1.2.2 (Recommencing of Work) and 3.1.2.3 (Right to Suspend Due to Default) from the Two-Party and Multiparty Affected System Facilities Construction Agreement (*pro forma* LGIP appendices 11 and 12, respectively) to ensure consistency between the *pro forma* affected system facilities construction agreements and the *pro forma* LGIA.²⁸⁸

a. First Compliance Order

149. In the First Compliance Order, the Commission found that PJM's proposal partially complies with the requirement of Order Nos. 2023 and 2023-A to propose *pro forma* agreements for affected systems.²⁸⁹ However, the Commission found that PJM did not demonstrate compliance with the *pro forma* Affected System Study Agreement, because PJM had not yet submitted Tariff sheets with its proposed *pro forma* Affected System Impact Study Agreement. The Commission further declined PJM's request to accept its proposal to use PJM's *pro forma* Affected System Impact Study Agreement prior to reviewing the actual Tariff revisions. The Commission directed PJM to submit a

²⁸⁶ Order No. 2023 184 FERC ¶ 61,054 at P 1110; *see also pro forma* LGIP § 9.1.

²⁸⁷ Order No. 2023, 184 FERC ¶ 61,054 at PP 1171, 1232; *see also pro forma* LGIP, apps. 9, 10.

²⁸⁸ Order No. 2023-A, 186 FERC ¶ 61,199 at P 533; *see also pro forma* LGIP, apps. 10, 11.

²⁸⁹ Order No. 2023, 184 FERC ¶ 61,054 at P 278.

compliance filing that includes Tariff revisions for the *pro forma* Affected System Impact Study Agreement in compliance with the requirements of Order Nos. 2023 and 2023-A.²⁹⁰

b. Second Compliance Filing

150. PJM proposes Tariff provisions for a *pro forma* Affected System Customer Impact Study Agreement in compliance with the requirements of Order Nos. 2023 and 2023-A and the Commission's directives in the First Compliance Order.²⁹¹ PJM asserts that the Affected System Customer Impact Study Agreement is "substantively consistent" with the objectives of Order Nos. 2023 and 2023-A, but requests certain independent entity variations, as further explained below.²⁹² PJM asserts that the requested independent entity variations from the *pro forma* LGIP Two-Party Affected System Study Agreement are necessary to be consistent with other elements of the study agreements included in the PJM interconnection process and to align the Affected System Customer Impact Study Agreement with the objectives in Order Nos. 2023 and 2023-A of efficient and expedient processing of affected system studies.

151. PJM asserts that its proposed *pro forma* Affected System Customer Impact Study Agreement captures all substantive terms and conditions set forth in the *pro forma* LGIP Two-Party Affected System Study Agreement, including the scope of the study and identification of the technical information to be assessed.²⁹³ PJM explains that sections 1 through 3 of its *pro forma* Affected System Customer Impact Study Agreement capture the recitals of the *pro forma* LGIP Two-Party Affected System Study Agreement identifying the parties of the agreement, the date of the agreement, and the purpose of the agreement. PJM explains that section 4 of its *pro forma* Affected System Customer Impact Study Agreement indicates that capitalized terms not otherwise defined have the meaning set forth in the Tariff, which aligns with the requirements in article 1 of the *pro forma* LGIP Two-Party Affected System Study Agreement. PJM states that sections 5 and 6 of its *pro forma* Affected System Customer Impact Study Agreement reflect the requirements of article 3 and Attachment A of the *pro forma* LGIP Two-Party Affected System Study Agreement providing the scope of the agreement and specifying the assumptions to be considered. PJM asserts its *pro forma* Affected System Customer Impact Study Agreement expands upon the general references to standard miscellaneous terms (i.e. indemnities, representations, disclaimers) in the *pro forma* LGIP Two-Party

²⁹⁰ *Id.* P 279.

²⁹¹ Second Compliance Filing at 30; PJM Tariff, pt. IX, subpt. O (Form of Affected System Customer Impact Study) (0.0.0).

²⁹² Second Compliance Filing at 30.

²⁹³ *Id.* at 31.

Affected System Study Agreement and provides explicit terms and conditions for each of these elements of the contract in section 7 of the *pro forma* Affected System Customer Impact Study Agreement. PJM states that each of these terms and conditions are used elsewhere in PJM study agreements and are consistent with best practices of the industry.

152. PJM requests certain independent entity variations for additional terms and conditions in its *pro forma* Affected System Customer Impact Study Agreement to allow for consistency among study agreements in PJM's interconnection process. First, PJM requests an independent entity variation to include a \$30,000 study deposit (affected system impact study deposit) due at the time the *pro forma* Affected System Customer Impact Study Agreement is executed.²⁹⁴ PJM explains that the *pro forma* Affected System Customer Impact Study Agreement notes that the actual Affected System Impact Study costs may exceed the affected system impact study deposit and that the affected system customer is responsible for all Affected System Impact Study costs. PJM states that the proposed provision further provides that if PJM sends the affected system customer notification of additional costs, then the affected system customer must pay all additional costs within 20 business days of PJM's sending of the notification. PJM states that if the affected system customer fails to pay the affected system impact study deposit or any additional costs within the timeframe provided, the Affected System Customer Impact Study Agreement will be terminated. PJM asserts that the additional cost provisions are necessary not only to cover PJM's costs for study completion but also to ensure that the Affected System Impact Study process runs in parallel with other aspects of PJM's Cycle timeline.²⁹⁵ PJM states that the affected system impact study deposit is consistent with other study deposit requirements in the interconnection process, and the timing to pay for costs that exceed the deposit is similarly consistent with other elements of the Cycle process.

153. Second, PJM requests an independent entity variation to include a provision that provides that if the affected system customer elects to cancel the Affected System Impact Study prior to its completion, then the Affected System customer must provide PJM with at least five business days prior written notice.²⁹⁶ PJM states that the affected system customer must reimburse PJM for the total actual costs incurred for work associated with the Affected System Impact Study prior to the notification to cancel the Affected System Impact Study, as well as any actual costs incurred by PJM in administering the cancellation process. PJM explains that as soon as practicable after receiving the notification to cancel the Affected System Impact Study, PJM will return any amount by

²⁹⁴ *Id.* at 32.

²⁹⁵ *Id.*

²⁹⁶ *Id.* at 33.

which the affected system impact study deposit exceeds the total actual costs, or if the total actual costs exceed the affected system impact study deposit, PJM shall submit to the affected system customer a written invoice for the amount due. PJM asserts that the proposed additional provision fills a gap in the *pro forma* LGIP Two-Party Affected System Study Agreement by ensuring that PJM is reimbursed for all costs associated with performing an Affected System Impact Study in the event of a withdrawal.

154. Finally, PJM requests an independent entity variation with respect to the provision of technical information by the affected system customer and proposes an additional provision requiring that affected system customers provide requested additional technical information to PJM within 10 business days of PJM's request, and that delays in providing that information may cause delays to the affected system customer's receipt of the results of the Affected System Impact Study.²⁹⁷ PJM further proposes that if the affected system customer fails to provide any additional technical information within 10 business days of PJM's request, then the agreement shall be terminated.²⁹⁸ PJM states that sections 8 and 9 of its *pro forma* Affected System Customer Impact Study Agreement provide that PJM will complete the Impact Study on or before 120 days after receipt of the affected system customer's technical information, and permits extensions for restudy, at PJM's sole discretion, if a change in case assumption occurs. PJM asserts that the additional obligations are necessary to ensure that PJM can expeditiously review all relevant technical information necessary to accurately identify any impacts to the transmission system, and to prevent cascading delays due to backlogs of data that must be reviewed and analyzed in order to complete Affected System Impact Studies.

c. Protest

155. Clean Energy Associations argue that PJM's proposal to collect full payment for study costs within 20 business days of PJM's notice or face termination of their executed agreement is unnecessarily punitive and that, without an upfront estimate as PJM proposes, affected system customers will face greater uncertainty and a higher likelihood of receiving unplanned additional study cost notices.²⁹⁹ Clean Energy Associations assert that PJM's proposal is unnecessarily punitive because unlike PJM, MISO, SPP, ISO-NE, and CAISO each allow thirty calendar days for payment of

²⁹⁷ *Id.*

²⁹⁸ *Id.* at 34.

²⁹⁹ Clean Energy Associations Protest at 5.

additional study costs following notice, with the consequence limited to loss of queue position or study status rather than automatic termination.³⁰⁰

d. Answer

156. In response to Clean Energy Associations' arguments that PJM's automatic termination provisions are punitive, PJM explains that the deadline ensures that the affected system impact study process runs on the same schedule as other aspects of PJM's interconnection cycle timeline, especially considering the volume of interconnection requests PJM receives compared to other RTOs/ISOs.³⁰¹

e. Commission Determination

157. We find that PJM's proposed revisions to its Tariff partially comply with the requirements of Order Nos. 2023 and 2023-A to adopt affected system *pro forma* agreements, as discussed below. We find that PJM's proposed *pro forma* Affected System Customer Impact Study Agreement complies with the *pro forma* LGIP regarding most of the terms and conditions. Specifically, we find that PJM's proposed *pro forma* Affected System Customer Impact Study Agreement is consistent with the *pro forma* LGIP in identifying the parties, date, and scope of the agreement, as well as the technical information to be assessed in the study. We also find that PJM's inclusion of explicit terms and conditions for each of the standard miscellaneous terms (i.e., indemnities, representations, and disclaimers) referenced in the *pro forma* LGIP is consistent with the requirements of Order Nos. 2023 and 2023-A. We grant PJM's requested independent entity variation concerning affected system study deposits because we find that PJM's proposal is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 2023 and 2023-A. Specifically, we find that PJM's proposed revisions regarding an upfront \$30,000 study deposit, while ensuring that the affected system customer is responsible for the actual costs of the Affected System Impact Study and providing affected system customers with 20 business days to pay any costs in excess of the deposit, accomplishes the purposes of Order No. 2023 to effectuate actual payment of affected system study costs and to outline the consequences for failure to do so.³⁰²

158. We also grant PJM's requested independent entity variations regarding the affected system customer's cancellation of the Affected System Customer Impact Agreement, requirements for the provision of technical information, and payment of

³⁰⁰ *Id.* & n. 18.

³⁰¹ PJM Answer at 5-6.

³⁰² Order No. 2023, 184 FERC ¶ 61,054 at P 1157.

additional study costs because we find that PJM's proposals are just and reasonable and not unduly discriminatory or preferential and accomplish the purposes of Order Nos. 2023 and 2023-A. Regarding Clean Energy Associations' arguments on the additional study cost provision, we note at the outset that PJM's proposal is in business days whereas the other RTO/ISO examples that Clean Energy Associations point to are in calendar days, and accordingly, the actual difference in days is minimal. Further, we note that PJM's proposed termination of an affected study agreement for failure to pay additional study costs is equivalent to the loss of queue position or study status in the other RTO/ISO examples. As PJM explains, the additional study cost provision is necessary not only to cover PJM's costs for the completion of the Affected System Customer Impact Study, but also to enable PJM to timely proceed with its proposed Affected System Facilities Study.³⁰³ We further find that PJM's independent entity variations providing standard terms for cancellation of the Affected System Customer Impact Agreement and for the provision of technical information accomplish the purposes of Order No. 2023 for a more transparent, efficient, and cost-effective interconnection process by ensuring that affected system interconnection customers know the standard scope and terms of agreements for the affected system interconnection process prior to entering the interconnection queue.³⁰⁴

159. However, we find that PJM's proposed *pro forma* Affected System Customer Impact Study Agreement only partially complies with the requirements of Order Nos. 2023 and 2023-A because it does not include the information set forth in Article 5 of appendices 9 and 10 to the *pro forma* LGIP³⁰⁵ despite PJM's general assertion. Accordingly, we direct PJM to submit a compliance filing within 60 days of the date of this order to incorporate in its Tariff the information set forth in Article 5 of appendices 9

³⁰³ Second Compliance Filing at 32.

³⁰⁴ Order No. 2023, 184 FERC ¶ 61,054 at P 1183.

³⁰⁵ Article 5 of the *pro forma* LGIP Affected System Study Agreement states that the Affected System Study shall provide: "identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection; identification of any thermal overload or voltage limit violations resulting from the interconnection; identification of any instability or inadequately damped response to system disturbances resulting from the interconnection; non-binding, good faith estimated cost and time requirement to construct facilities required on Transmission Provider's Transmission System to accommodate the interconnection of the [generating facilities] to the transmission system of the host transmission provider; and description of how such facilities will address the identified short circuit, instability, and power flow issues." See also *pro forma* LGIP, apps. 9, 10.

and 10 to the *pro forma* LGIP or justify its proposal under the independent entity variation standard.

160. We also note that in its compliance filing PJM requested an independent entity variation for the *pro forma* LGIP term and definition for “Affected System Study Agreement” for PJM to retain its existing term and definition “Affected System Customer Facilities Study Application and Agreement” in its Tariff, which shall mean the agreement set forth in PJM Tariff, Part IX, Subpart L. However, in the instant compliance filing, PJM relies solely on its proposed *pro forma* Affected System Customer Impact Study Agreement to comply with the *pro forma* LGIP definition of “Affected System Study Agreement.” We note that the Commission has directed PJM to submit a compliance filing within 60 days of the date of this order to further justify its independent entity variations for the affected system-related terms and definitions above, which includes “Affected System Study Agreement.”³⁰⁶

10. Co-Located Generating Facilities

161. In Order No. 2023, the Commission revised *pro forma* LGIP section 3.1.2 to require transmission providers to allow more than one generating facility to co-locate on a shared site behind a single point of interconnection and share a single interconnection request.³⁰⁷ The Commission clarified that interconnection customers have the choice to structure their interconnection requests for co-located generating facilities according to their preference (i.e., as separate interconnection requests or as a shared interconnection request) and that Order No. 2023 does not require interconnection customers to share a single interconnection request for multiple generating facilities located on the same site.³⁰⁸ The Commission also clarified that co-located generating facilities can be owned by a single interconnection customer with multiple generating facilities sharing a site, or by multiple interconnection customers that have a contract or other agreement that allows for shared land use.³⁰⁹

a. First Compliance Order

162. In the First Compliance Order, the Commission found that PJM’s proposal to retain its existing Tariff provisions did not comply with the requirements of Order

³⁰⁶ See *supra* PP 132, 138.

³⁰⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 1346; see also *pro forma* LGIP § 3.1.2.

³⁰⁸ Order No. 2023, 184 FERC ¶ 61,054 at PP 1351-1352.

³⁰⁹ *Id.* P 1355.

Nos. 2023 and 2023-A, which explicitly permit interconnection customers to structure their interconnection requests for co-located generating facilities as separate interconnection requests or as a shared interconnection request.³¹⁰ Accordingly, the Commission directed PJM to submit a further compliance filing proposing Tariff revisions that provide interconnection customers with the flexibility to submit either a single or multiple interconnection requests for multiple generation facilities that are proposed to be located at a single point of interconnection.

b. Second Compliance Filing

163. PJM proposes revisions to clarify that interconnection customers can submit either a single or multiple new service requests for multiple generating facilities located at a single point of interconnection.³¹¹ PJM further clarifies that multiple projects can share interconnection customer interconnection facilities regardless of whether they are submitted under a single or multiple new service requests.³¹²

164. Additionally, PJM proposes to adopt several new Tariff provisions applicable to co-located generating facilities. These provisions include requirements that interconnection customers submit documentation with their interconnection request describing the proposed configuration of the generating facilities, the proposed ownership of the interconnection customer interconnection facilities, and the parties' division of rights and responsibilities with respect to the operation, maintenance, and repair of those facilities, as well as any additional information specified in the PJM Manuals regarding the operation of generating facilities proposing to share interconnection facilities.³¹³ PJM further proposes to require interconnection customers to demonstrate consent to the shared use of the interconnection customer interconnection facilities, and states that this requirement would apply to co-located generating facilities submitted either as a single or multiple new service requests.

165. Additionally, PJM proposes a new Schedule N to its *pro forma* GIA governing co-located generating facilities behind a single point of interconnection. The proposed Schedule N would require interconnection customers to enter into shared facilities

³¹⁰ First Compliance Order, 192 FERC ¶ 61,077 at P 283.

³¹¹ Second Compliance Filing at 35; PJM Tariff, pt. VIII, subpt. A, § 402 (3.0.0), § 402(A)(6).

³¹² Second Compliance Filing at 35-36; PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0), § 403(A).

³¹³ Second Compliance Filing at 36; PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0), § 403(A)(1)(h), (D)(2).

agreements to govern the ownership, control, and use of the interconnection customer interconnection facilities. PJM states that Schedule N also includes terms and conditions regarding metering, billing and payments, default, and notice requirements governing the use of the shared interconnection customer interconnection facilities.³¹⁴

c. Protests

166. Inverenergy and Shell Companies argue that PJM exceeded the scope of the Commission's compliance directive by introducing new substantive Tariff requirements that go beyond the limited clarification requested by the Commission. Both protests contend that the new documentation requirements and proposed Schedule N improperly require developers to negotiate and submit detailed shared-facility terms at the interconnection request stage, when such information may not yet be known.³¹⁵

167. Inverenergy further argues that the proposed provisions could expose one co-located generating facility to adverse consequences, including potential termination of its GIA, based on the default or withdrawal of another co-located generating facility. Inverenergy and Shell assert that PJM failed to justify these additions under the independent entity variation standard and that, to the extent PJM seeks to adopt new rules governing co-located generation facilities, such rules should be proposed through a separate filing under section 205 of the FPA.³¹⁶

d. Commission Determination

168. We find that PJM's proposed revisions concerning co-located generating facilities partially comply with the Commission's directive in the First Compliance Order.

169. Specifically, we find that PJM's proposed revisions clarifying that interconnection customers may submit either a single or multiple new service requests for co-located generating facilities, and that multiple projects may share interconnection customer interconnection facilities regardless of whether they are submitted under a single or multiple new service requests, comply with the Commission's directive in the First Compliance Order.

170. However, we reject PJM's additional proposed Tariff provisions governing co-located generating facilities as outside of the scope of this compliance proceeding

³¹⁴ Second Compliance Filing at 37; PJM Tariff, pt. IX, subpt. B, GIA Schedule N (0.0.0).

³¹⁵ Inverenergy Protest at 3-4; Shell Companies Protest at 23-24.

³¹⁶ Inverenergy Protest at 4; Shell Companies Protest at 23-24.

because these provisions introduce new substantive requirements on interconnection customers that go beyond the Commission's directive in the First Compliance Order and are not required by Order Nos. 2023 and 2023-A. This determination is without prejudice to PJM proposing this additional language in a future FPA section 205 filing. Specifically, PJM's proposed requirement for interconnection customers to submit documentation with their interconnection request detailing the shared facility configurations, ownership arrangements, and division of rights and responsibilities with respect to operations, maintenance, and repair is outside of the scope of the Commission's directive in the First Compliance Order. Additionally, PJM's proposal to introduce a new *pro forma* GIA Schedule N, which would establish terms for shared facilities, including metering, billing, default, and notice provisions, is also outside of the scope of the Commission's directive in the First Compliance Order because it establishes new contractual terms and conditions governing co-located generating facilities that go beyond the Commission's directive in the First Compliance Order and that are not required by Order Nos. 2023 and 2023-A. Accordingly, we direct PJM to submit a further compliance filing within 60 days of the date of this order to remove from its Tariff the proposed requirement to submit documentation with the interconnection request detailing the shared facility configurations, ownership arrangements, and division of rights and responsibilities with respect to operations, maintenance, and repair, and we reject PJM's proposed *pro forma* GIA Schedule N.

11. Availability of Surplus Interconnection Service

171. In Order No. 2023, the Commission revised section 3.3.1 (Surplus Interconnection Service Request) of the *pro forma* LGIP to require transmission providers to allow interconnection customers to access the surplus interconnection service process once the original interconnection customer has an executed LGIA or requests the filing of an unexecuted LGIA.³¹⁷ The Commission found that this reform will enable interconnection customers with unused interconnection service to let other generating facilities use that interconnection service earlier than is currently allowed and, therefore, increase overall efficiency of the interconnection queue and in turn ensure just and reasonable rates.³¹⁸ The Commission clarified that this reform does not modify how the surplus interconnection service process is conducted, but rather addresses when a request for surplus interconnection service may be submitted.³¹⁹ The Commission further clarified that the original interconnection customer must have an LGIA in place, either executed or

³¹⁷ Order No. 2023, 184 FERC ¶ 61,054 at P 1436; *see also pro forma* LGIP § 3.3.1.

³¹⁸ Order No. 2023, 184 FERC ¶ 61,054 at P 1437.

³¹⁹ *Id.* P 1447.

requested to be filed unexecuted with the Commission, prior to the transmission provider tendering any LGIA for surplus interconnection service.³²⁰

a. First Compliance Order

172. In the First Compliance Order, the Commission directed PJM to submit a further compliance filing that justifies how its existing Tariff provision concerning surplus interconnection service complies with the requirement in Order No. 2023.³²¹

b. Second Compliance Filing

173. PJM explains that the surplus interconnection service expansion Tariff provisions it filed and that were accepted by the Commission comply with the requirements of Order Nos. 2023 and 2023-A.³²² PJM states that, consistent with those orders, the provisions accepted in the SIS Expansion Order provide access to surplus interconnection service once the original interconnection customer has an executed GIA or has directed PJM to file the GIA unexecuted.³²³

c. Commission Determination

174. We find that PJM's justification concerning surplus interconnection service complies with the Commission's directive in the First Compliance Order. Specifically, we find that PJM's existing Tariff provisions concerning surplus interconnection service are just and reasonable and not unduly discriminatory or preferential and accomplish the purposes of Order Nos. 2023 and 2023-A because as PJM explains, its Tariff provides access to surplus interconnection service once the original interconnection customer has an executed GIA or has directed PJM to file the GIA unexecuted.

12. Operating Assumptions for Interconnection Studies

175. In Order No. 2023, the Commission revised sections 3.1.2, 3.2.1.2 (The Study), 3.2.2.2 (The Study), 3.3.1, 3.4.2, 4.4.3, 7.3, 8.2 (Scope of Interconnection Facilities Study), and Appendix 1 (Interconnection Request for a Large Generating Facility) of the *pro forma* LGIP and article 17.2 (Violation of Operating Assumptions for Generating

³²⁰ *Id.* P 1445.

³²¹ First Compliance Order, 192 FERC ¶ 61,077 at P 293.

³²² Second Compliance Filing at 38-39 (citing *PJM Interconnection, L.L.C.*, 190 FERC ¶ 61,083 (2025) (SIS Expansion Order)).

³²³ *Id.* at 39 (citing PJM Tariff, pt. VIII, subpt. E, § 414 (1.0.0)).

Facilities) and Appendix H (Operating Assumptions for Generating Facility) of the *pro forma* LGIA to require transmission providers, at the request of the interconnection customer, to use operating assumptions in interconnection studies that reflect the proposed charging behavior of electric storage resources (whether standalone, co-located generating facilities, or part of a hybrid generating facility)—i.e., whether the interconnecting generating facility will or will not charge during peak load conditions—unless good utility practice, including applicable reliability standards, otherwise requires the use of different operating assumptions.³²⁴ The Commission required interconnection customers to provide the proposed operating assumptions in the initial interconnection request.³²⁵ The Commission also required that, if a transmission provider finds the interconnection customer's proposed operating assumptions in conflict with good utility practice, the transmission provider must provide the interconnection customer with a written explanation of why the operating assumptions are insufficient or inappropriate no later than 30 calendar days before the end of the customer engagement window and allow the interconnection customer to resubmit the operating assumptions at least 10 calendar days before the end of the customer engagement window.³²⁶ Finally, the Commission added article 17.2 to the *pro forma* LGIA to describe a violation of operating assumptions and Appendix H to the *pro forma* LGIA as the location for the interconnection customer to memorialize its operating assumptions.³²⁷

a. First Compliance Order

176. In the First Compliance Order, the Commission directed PJM to submit proposed Tariff revisions that incorporate the requirement that transmission providers, at the request of the interconnection customer, use operating assumptions in interconnection studies that reflect the proposed charging behavior of electric storage resources unless good utility practice, including applicable reliability standards, otherwise requires the use of different operating assumptions.

³²⁴ Order No. 2023, 184 FERC ¶ 61,054 at P 1509; *see also pro forma* LGIP §§ 3.1.2, 3.2.1.2, 3.2.2.2, 3.3.1, 3.4.2, 4.4.3, 7.3, 8.2, app.1; *pro forma* LGIA art. 17.2, app. H.

³²⁵ Order No. 2023, 184 FERC ¶ 61,054 at P 1520; *see also pro forma* LGIP § 3.4.2(v).

³²⁶ Order No. 2023, 184 FERC ¶ 61,054 at P 1511.

³²⁷ *Id.* P 1521; *see also pro forma* LGIA art. 17.2, app. H.

b. Second Compliance Filing

177. PJM proposes revisions to provide interconnection customers with a binary choice for how electric storage resources are studied in interconnection studies.³²⁸ Under PJM's proposal, interconnection customers may elect to have their electric storage facilities studied as charging 24 hours a day, including at peak periods, while electric storage facilities that do not make this election would be studied as charging only during off-peak periods, consistent with PJM's fuel-based dispatch assumptions set forth in its planning criteria.³²⁹ PJM also proposes revisions to reference PJM's fuel-based dispatch assumptions in its Tariff provisions regarding surplus interconnection service to provide the same assumption for electric storage facilities seeking surplus interconnection service.³³⁰

178. PJM argues that this approach incorporates the operating assumptions requirement adopted in Order No. 2023 while avoiding complicated and slow interconnection studies. PJM further states that its simple binary choice and reference to its simplifying fuel-based dispatch assumptions is an efficient means of achieving the final rule's objective of studying electric storage facilities using realistic operating assumptions that avoid the need for unnecessary network upgrades.³³¹

c. Protest

179. Shell Companies argue that PJM's proposed binary framework does not comply with Order No. 2023. Shell Companies asserts that, in its experience as a developer of generation projects, interconnection customers may require a range of charging scenarios beyond off-peak periods and that charging assumptions modeled in the interconnection study effectively define the facility's operating limits, such that limiting study options would constrain storage facility operations.³³² Shell Companies further argue that PJM has not adequately supported its request for an independent entity variation and that there is nothing unique about PJM that prevents implementation of the Order No. 2023 requirement as written.³³³ Shell Companies request that if the Commission accepts

³²⁸ Second Compliance Filing at 40; PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0).

³²⁹ Second Compliance Filing at 40.

³³⁰ *Id.* at 41; PJM Tariff, pt. VIII, subpt. E, § 414 (3.0.0).

³³¹ Second Compliance Filing at 41-42.

³³² Shell Companies Protest at 28.

³³³ *Id.* at 28-29.

PJM's proposal, the Commission require PJM to provide interconnection customers with the option to have their proposed storage facilities studied as charging during both at-peak and off-peak periods, and allow the customer to select its charging parameters, including the number of megawatts of charging during at-peak and off-peak periods, following those studies.

d. Commission Determination

180. We find that PJM's proposed revisions concerning the operating assumptions for interconnection studies partially comply with the requirements of Order Nos. 2023 and 2023-A. Specifically, we find that PJM's Tariff revisions accomplish the purposes of Order No. 2023 because PJM's proposal allows interconnection customers that seek to be studied as charging at peak periods to elect that option, while studying other electric storage resources using off-peak charging assumptions, with the exceptions discussed below.

181. We are not persuaded by Shell Companies protest that PJM's proposal fails to comply with the requirements of Order Nos. 2023 and 2023-A, because in Order No. 2023, the Commission only required that interconnection studies reflect the planned operating assumptions for energy withdrawals by electric storage resources, meaning whether the facility charges during peak or off-peak load conditions.³³⁴ To the extent Shell Companies request that PJM be required to study electric storage resources using project-specific megawatt charging levels during peak and off-peak periods, we find that request exceeds the scope of Order Nos. 2023 and 2023-A and this compliance proceeding.

182. However, we note that PJM's filing does not include revisions to its Tariff comparable to the Commission's *pro forma* LGIA article 17.2 (Violation of Operating Assumptions) and Appendix H (Operating Assumptions for Generating Facilities), which are intended to memorialize the operating assumptions used in interconnection studies in the interconnection customer's LGIA. Accordingly, we direct PJM to submit a further compliance filing revising its Tariff to incorporate provisions consistent with the Commission's *pro forma* LGIA article 17.2 and Appendix H, as adopted in Order Nos. 2023 and 2023-A or otherwise justify its proposed variations under the independent entity variation standard.

³³⁴ Order No. 2023, 184 FERC ¶ 61,054 at P 1509.

13. Incorporating the Enumerated Alternative Transmission Technologies

183. In Order No. 2023, the Commission revised section 7.3 of the *pro forma* LGIP, and sections 3.3.6 and 3.4.10 of the *pro forma* SGIP.³³⁵ The Commission required transmission providers to evaluate the following enumerated list of alternative transmission technologies: static synchronous compensators, static VAR compensators, advanced power flow control devices, transmission switching, synchronous condensers, voltage source converters, advanced conductors, and tower lifting.³³⁶ The Commission revised *pro forma* LGIP section 7.3 to require transmission providers to evaluate the list of alternative transmission technologies enumerated in Order No. 2023 during the cluster study, including any restudies, of the generator interconnection process in all instances (i.e., for all interconnection customers in a cluster), without the need for a request from an interconnection customer. The Commission required transmission providers to evaluate each alternative transmission technology listed in *pro forma* LGIP section 7.3 and to determine, in the transmission provider's sole discretion, whether it should be used, consistent with good utility practice, applicable reliability standards, and other applicable regulatory requirements. Finally, the Commission required transmission providers to include, in the *pro forma* LGIP cluster study report, an explanation of the results of the evaluation of the enumerated alternative transmission technologies for feasibility, cost, and time savings as an alternative to a traditional network upgrade.

184. The Commission revised sections 3.3.6 and 3.4.10 of the *pro forma* SGIP, consistent with the *pro forma* LGIP requirement, to require transmission providers to evaluate the enumerated alternative transmission technologies when performing interconnection studies for small generating facilities, without the need for a request from an interconnection customer.³³⁷ The Commission required such evaluations to occur during the *pro forma* SGIP feasibility study and system impact study of the generator interconnection process. The Commission found that it is appropriate for these evaluations to occur during the relevant *pro forma* SGIP studies where network upgrades are identified, consistent with the *pro forma* LGIP requirement. The Commission required transmission providers to evaluate each alternative transmission technology listed in *pro forma* SGIP sections 3.3.6 and 3.4.10 and determine, in the transmission provider's sole discretion, whether it should be used, consistent with good utility practice, applicable reliability standards, and other applicable regulatory requirements.

³³⁵ *Id.* P 1578; *see also pro forma* LGIP § 7.3; *pro forma* SGIP §§ 3.3.6, 3.4.10.

³³⁶ Order No. 2023, 184 FERC ¶ 61,054 at P 1578.

³³⁷ *Id.* P 1580.

a. First Compliance Order

185. In the First Compliance Order, the Commission found that that PJM had not satisfactorily demonstrated that it already considers alternative transmission technologies as part of the interconnection process or that its newly developed Technical Reference Guides accomplish the purposes of Order No. 2023.³³⁸ The Commission rejected PJM's request for an independent entity variation to deviate from Order No. 2023's requirement that transmission providers include the results of their evaluation of the feasibility, cost, and time savings of alternative transmission technologies as an alternative to traditional transmission technologies in interconnection study reports. Accordingly, the Commission directed PJM to submit a further compliance filing to revise its Tariff to adopt the requirement that transmission providers must evaluate the list of alternative transmission technologies enumerated in Order No. 2023 during the cluster study, including any restudies, of the generator interconnection process in all instances.

b. Second Compliance Filing

186. PJM proposes revisions to its Tariff, Part VIII, Subpart C, section 406(A)(1)(i) to add a new subsection to provide that, at the request of the interconnection customer, PJM will evaluate the enumerated list of alternative transmission technologies from the *pro forma* LGIP (i.e., static synchronous compensators, static VAR compensators, advanced power flow control devices, transmission switching, synchronous condensers, voltage source converters, advanced conductors, and tower lifting), during the Phase II System Impact Study and the Phase III System Impact Study to determine whether the specified technologies should be used in place of traditional transmission technologies, consistent with good utility practice, applicable reliability standards, and applicable laws and regulations.³³⁹ PJM proposes that the interconnection customer must request such evaluation and provide the requisite model information to allow PJM to evaluate the technology (as specified in Manual 14H) by the close of the Decision Point I phase. PJM explains that new section 407(A)(1)(f) also provides that PJM will include an explanation of the results of PJM's evaluation of each specific alternative transmission

³³⁸ First Compliance Order, 192 FERC ¶ 61,077 at P 318 (citing *ISO New Eng. Inc.*, 164 FERC ¶ 61,222 at P 9 (citing Order No. 2003, 104 FERC ¶ 61,103 at PP 26, 827; *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,247 at P 20; *Cal. Indep. Sys. Operator Corp.*, 140 FERC ¶ 61,070 at P 44)).

³³⁹ Second Compliance Filing at 42-43; PJM Tariff, pt. VIII, subpt. C, § 406 (Decision Point I) (3.0.0).

technology in the Phase II System Impact Study Report and the Phase III System Impact Study Report.³⁴⁰

187. PJM states that it seeks an independent entity variation to evaluate alternative transmission technologies only at the interconnection customer's request, and to specify in the PJM Tariff that interconnection customers must submit the applicable model information, as detailed in the PJM Manuals, by a specified point in the interconnection process so that PJM may evaluate the requested technology in a timely manner. PJM notes that this request is similar to the independent entity variation request MISO sought and received from the Commission.³⁴¹ PJM argues that this independent entity variation request is just and reasonable and is consistent with the requirements of Order Nos. 2023 and 2023-A because it provides that the enumerated technologies will be studied for benefits to the entire Cycle, not just for the interconnection customer that submitted the request for consideration, and those enumerated technologies will be studied throughout most of the Cycle study process (i.e., Phases II and III).³⁴²

188. PJM also requests an independent entity variation to forgo studying alternative transmission technologies in the Phase I System Impact Study. PJM states that it expects a significant number of project withdrawals at the end of Phase I of each Cycle. PJM asserts that because of the significant number of withdrawals, the Phase I study data will be less reflective of future conditions and, therefore, the evaluation of alternative technologies during Phase I is less useful.³⁴³ PJM argues that alternative technologies are most usefully evaluated during the Phase II System Impact Study, which is essentially a re-tool of the Phase I System Impact Study with a smaller group of viable projects, and the Phase III System Impact Study, which includes facilities studies with cost data. PJM adds that its proposed Tariff revisions also provide clarity for interconnection customers regarding the information required in submissions for the study of alternative transmission technologies.³⁴⁴

³⁴⁰ Second Compliance Filing at 43; PJM Tariff, pt. VIII, subpt. C, § 407 (Phase II) (2.0.0).

³⁴¹ Second Compliance Filing at 43 (citing *Midcontinent Indep. Sys. Operator, Inc.*, 191 FERC ¶ 61,229 at P 323).

³⁴² *Id.* (citing *Midcontinent Indep. Sys. Operator, Inc.*, 191 FERC ¶ 61,229 at PP 322-323).

³⁴³ *Id.* at 43-44.

³⁴⁴ *Id.* at 44 (citing *Midcontinent Indep. Sys. Operator, Inc.*, 191 FERC ¶ 61,229 at P 323).

c. **Commission Determination**

189. We find that PJM's proposed revisions to its Tariff, Part VIII, Subpart C, sections 406(A)(1)(i) and 407(A)(1)(f) relating to alternative transmission technologies comply with the requirements of Order Nos. 2023 and 2023-A because PJM includes the required list of enumerated alternative transmission technologies, as well as the standards by which to determine if such technologies should be used.³⁴⁵ We also accept PJM's independent entity variation request to evaluate alternative transmission technologies only at the interconnection customer's request.

190. While Order No. 2023 found that it would be overly burdensome and complex for transmission providers to track and process interconnection customer-specific requests,³⁴⁶ we do not believe that concern is present here because PJM's proposal provides that PJM will evaluate the enumerated alternative transmission technologies for an entire group rather than by each individual interconnection request,³⁴⁷ and allows interconnection customers to submit alternative transmission technologies for consideration during the Phase II System Impact Study and the Phase III System Impact Study stages of PJM's phased interconnection process.³⁴⁸ We find that PJM's independent entity variations are just and reasonable and not unduly discriminatory or preferential and accomplish the purposes of Order Nos. 2023 and 2023-A because they provide clarity to interconnection customers as to what information is required when requesting an evaluation of alternative transmission technologies, the scope of the evaluation, and the timing of the final results of the evaluation.

191. Regarding the requested independent entity variation to allow PJM to forgo studying the enumerated list of alternative transmission technologies in its Phase I System Impact Study, we deny PJM's independent entity variation request. Order No. 2023 modified the *pro forma* LGIP section 7.3 to require transmission providers to evaluate enumerated alternative transmission technologies during the cluster study,

³⁴⁵ We note that PJM studies both large and small generator interconnection requests together as part PJM's phased interconnection process and, therefore, PJM does not need to satisfy Order Nos. 2023 and 2023-A's requirements regarding *pro forma* Small Generator Interconnection Procedures and *pro forma* Small Generator Interconnection Agreements. See Initial Compliance Filing, Transmittal at 9.

³⁴⁶ Order No. 2023, 184 FERC ¶ 61,054 at P 1585.

³⁴⁷ Second Compliance Filing at 43, see also Order No. 2023, 184 FERC ¶ 61,054 at PP 1578, 1588, 1590.

³⁴⁸ Second Compliance Filing at 42, see also Order No. 2023, 184 FERC ¶ 61,054 at P 1578.

including any restudies, of the generator interconnection process in all instances.³⁴⁹ We find that PJM's assertion that studying the enumerated list of alternative transmission technologies in its Phase I System Impact Study is "less useful" because it anticipates a significant number of withdrawals at the end of Phase I does not demonstrate how its proposal accomplishes the purposes of the final rule. We therefore direct PJM to submit a further compliance filing within 60 days of the date of this order that requires PJM to study the enumerated list of alternative transmission technologies in its Phase I System Impact Study, or justify its proposal under the independent entity variation standard.

14. Modeling and Ride-Through Requirements for Non-Synchronous Generating Facilities

192. In Order No. 2023, the Commission revised Attachment A (Large Generating Facility Data) to Appendix 1 of the *pro forma* LGIP and Attachment 2 (Small Generator Interconnection Request) of the *pro forma* SGIP to require each interconnection customer requesting to interconnect a non-synchronous generating facility to submit to the transmission provider: (1) a validated user-defined root mean square (RMS) positive sequence dynamic model; (2) an appropriately parameterized generic library RMS positive sequence dynamic model, including a model block diagram of the inverter control system and plant control system, that corresponds to a model listed in a new table of acceptable models or a model otherwise approved by the Western Electricity Coordinating Council (WECC); and (3) a validated electromagnetic transient (EMT) model, if the transmission provider performs an EMT study as part of the interconnection study process.³⁵⁰

193. The Commission also: (1) defined a user-defined model as any set of programming code created by equipment manufacturers or developers that captures the latest features of controllers that are mainly software-based and represent the entities' control strategies but does not necessarily correspond to any particular generic library model, as contained in Attachment A to Appendix 1 of the *pro forma* LGIP and Attachment 2 of the *pro forma* SGIP; (2) revised Attachment A to Appendix 1 of the *pro forma* LGIP and Attachment 2 of the *pro forma* SGIP to add a table of acceptable generic library models, based on the current WECC list of approved dynamic models for renewable energy generating facilities; and (3) revised section 4.4.4 of the *pro forma* LGIP and section 1.4 (Modification of the Interconnection Request) of the *pro forma*

³⁴⁹ Order No. 2023, 184 FERC ¶ 61,054 at P 1578.

³⁵⁰ *Id.* P 1659; *see also pro forma* LGIP, app. 1, attach. A; *pro forma* SGIP, attach. 2.

SGIP to require that any proposed modification of the interconnection request be accompanied by updated models of the proposed generating facility.³⁵¹

194. The Commission revised article 9.7.3 (Ride Through Capability and Performance) of the *pro forma* LGIA and article 1.5.7 of the *pro forma* SGIA to require that, during abnormal frequency conditions and voltage conditions within the “no trip zone” defined by Reliability Standard PRC-024-3 or successor mandatory ride through reliability standards, the non-synchronous generating facility must ensure that, within any physical limitations of the generating facility, its control and protection settings are configured or set to: (1) continue active power production during disturbance and post disturbance periods at pre-disturbance levels unless providing primary frequency response or fast frequency response; (2) minimize reductions in active power and remain within dynamic voltage and current limits, if reactive power priority mode is enabled, unless providing primary frequency response or fast frequency response; (3) not artificially limit dynamic reactive power capability during disturbances; and (4) return to pre-disturbance active power levels without artificial ramp rate limits if active power is reduced, unless providing primary frequency response or fast frequency response.³⁵²

195. The Commission further revised the *pro forma* LGIA to require that all newly interconnecting large generating facilities provide frequency and voltage ride through capability consistent with any standards and guidelines that are applied to other generating facilities in the balancing authority area on a comparable basis.³⁵³ The Commission also replaced the term “applicable reliability council” with “electric reliability organization,” revised the definition of “applicable reliability standards,” replaced the term “control area” with “balancing authority area” throughout the *pro forma* LGIP, *pro forma* LGIA, and *pro forma* SGIA, and added the term “balancing authority.”

196. In Order No. 2023-A, the Commission revised *pro forma* LGIA article 9.7.3 and *pro forma* SGIA article 1.5.7 to state that a non-synchronous generating facility must ensure that, within any physical limitations of the generating facility, its control and protection settings are configured or set to continue active power production during disturbance and post disturbance periods at pre-disturbance levels, unless reactive power

³⁵¹ Order No. 2023, 184 FERC ¶ 61,054 at P 1660; *see also pro forma* LGIP § 4.4.4, app. 1, attach. A; *pro forma* SGIP § 1.4, attach. 2.

³⁵² Order No. 2023, 184 FERC ¶ 61,054 at P 1715.

³⁵³ *Id.* P 1733; *see also pro forma* LGIA art. 9.7.3.

priority mode is enabled or unless providing primary frequency response or fast frequency response.³⁵⁴

a. First Compliance Order

197. In the First Compliance Order, the Commission rejected PJM's proposal to rely solely on its Dynamic Model Development Guidelines, which are publicly posted on its website, to meet the modeling requirements of Order Nos. 2023 and 2023-A. The Commission directed PJM to submit a further compliance filing that incorporates the required language to Attachment A to Appendix 1 of the *pro forma* LGIP and Attachment 2 of the *pro forma* SGIP in PJM's Tariff or justifies the proposal under the independent entity variation standard.

198. The Commission also rejected PJM's argument that its existing Tariff complies with the ride-through requirements adopted in Order Nos. 2023 and 2023-A. The Commission directed PJM to submit proposed revisions to its Tariff, *pro forma* GIA, Schedule H to incorporate the performance requirements adopted in Order Nos. 2023 and 2023-A, or to provide further justification for the Commission's acceptance of its proposal under the independent entity variation standard.³⁵⁵

b. Second Compliance Filing

199. PJM proposes revisions to the definition of "Dynamic Model" that are consistent with the Order Nos. 2023 and 2023-A's requirements to include the three specific types of models³⁵⁶ and states that PJM's requirements for user-defined models are further detailed in the manuals.³⁵⁷ PJM proposes revisions to require that interconnection

³⁵⁴ Order No. 2023-A, 186 FERC ¶ 61,199 at P 661; *see also pro forma* LGIA art. 9.7.3; *pro forma* SGIA art. 1.5.7.

³⁵⁵ First Compliance Order, 192 FERC ¶ 61,077 at P 328.

³⁵⁶ As noted above, the *pro forma* LGIP requires interconnection customers seeking to interconnect non-synchronous resources to submit: (1) a validated user-defined RMS positive sequence dynamics model; (2) an appropriately parameterized standard library RMS positive sequence dynamics model; and (3) if applicable, a validated electromagnetic transient model.

³⁵⁷ Second Compliance Filing at 46; PJM Tariff, pt. VIII, subpt. A, § 400D (Definitions D) (1.0.0). We note that PJM studies both large and small generator interconnection requests together as part of PJM's phased interconnection process and, therefore, PJM does not need to satisfy Order Nos. 2023 and 2023-A's requirements regarding *pro forma* Small Generator Interconnection Procedures and *pro forma* Small Generator Interconnection Agreements. *See* Initial Compliance Filing, Transmittal at 9.

customers submit, for all new generating facilities, the required Dynamic Models and Dynamic Modeling Package in accordance to PJM Manual 14H.³⁵⁸

200. PJM proposes revisions to its Tariff to require all new generating facilities to provide frequency and voltage ride-through capability consistent with standards and guidelines applied to other generating facilities in the balancing authority area on a comparable basis.³⁵⁹ PJM asserts that its Tariff revisions “meet and even exceed” the modeling and ride-through requirements in Order Nos. 2023 and 2023-A because PJM proposes to apply its proposed modeling and ride-through requirements to all new generating facilities, not only new non-synchronous generating facilities.³⁶⁰

c. Commission Determination

201. We find that PJM’s proposed revisions concerning modeling requirements for non-synchronous generating facilities comply with the requirements of Order Nos. 2023 and 2023-A because PJM’s proposed definition of the “Dynamic Model” that must be submitted to PJM adopts the revised language in the Commission’s *pro forma* LGIP and *pro forma* SGIP, with the addition of language referring to the PJM Manuals for further implementation details. PJM’s proposed revisions also require new generating facilities to submit the required Dynamic Models and Dynamic Modeling Packages as part of their application for interconnection service.³⁶¹

202. We find that PJM’s proposed revisions concerning ride-through requirements for non-synchronous generating facilities do not comply with the requirements of Order Nos. 2023 and 2023-A. Order No. 2023 found that the ride-through requirements in the *pro forma* LGIA and *pro forma* SGIA were unjust and unreasonable because they “fail[ed] to account for a non-synchronous generating facility’s ability to engage in

³⁵⁸ Second Compliance Filing at 45; PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0), § 403 (A)(1)(p); *id.*, pt. VIII, subpt. C, § 406 (3.0.0), § 406(A)(1)(f); *id.*, pt. VIII, subpt. C, § 408 (4.0.0), § 408(A)(1)(g); *id.*, pt. IX, subpt. A (Form of Application and Study Agreement) (3.0.0); *id.*, pt. IX, subpt. G (Form of Necessary Studies Agreement) (2.0.0).

³⁵⁹ Second Compliance Filing at 46; *see also* PJM Tariff, pt. IX, subpt. B, Schedule H (1.0.0).

³⁶⁰ Second Compliance Filing at 46.

³⁶¹ *See* PJM Tariff, pt. VIII, subpt. B, § 403 (2.0.0), § 403(A)(1)(p).

momentary cessation.”³⁶² PJM’s proposal in the instant compliance filing, which continues to limit the definition of “ride through” to mean the generator must “stay connected to and synchronized” with the transmission system during system disturbances, does not address the Commission’s determination that the non-synchronous generator must, among other things, “continue active power production during disturbance and post disturbance periods at pre-disturbance levels...”³⁶³ Applying PJM’s current ride-through requirements to all generating facilities fails to remedy this issue, because “the physical characteristics of synchronous generating facilities result in such facilities continuing to inject electric current during transmission system disturbances;” and PJM’s proposal does not modify the performance requirements for non-synchronous resources to prohibit momentary cessation by such resources.³⁶⁴ Accordingly, we direct PJM to submit, within 60 days of this order, a further compliance filing to revise its Tariff, *pro forma* GIA, Schedule H to incorporate the ride-through requirements adopted in Order Nos. 2023 and 2023-A or justify its variation under the independent entity variation standard.

15. Effective Date

203. In Order No. 2023, the Commission stated that the requirements in transmission providers’ tariffs will not be effective until the Commission-approved effective date of the transmission provider’s filing in compliance with the final rule.³⁶⁵ In Order No. 2023-A, the Commission clarified that “transmission providers may propose effective dates in their compliance filings that align with their existing queue processing dates, such as the start of a new processing window. We will consider these requests on a case-by-case basis in each individual compliance filing.”³⁶⁶

a. Second Compliance Filing

204. For all proposed Tariff revisions except those regarding study delay penalties and the removal of the term “reasonable efforts,” PJM requests that “[o]nce the Commission establishes the effective date for this compliance filing and the commencement date of the next Cycle that will begin after the effective date is known, PJM will make a filing no

³⁶² Order No. 2023, 184 FERC ¶ 61,054 at P 1712. The Commission explained that momentary cessation is when a non-synchronous generating facility “cease[s] injecting current during transmission system disturbances.” *Id.*

³⁶³ *Id.* P 1715.

³⁶⁴ *Id.* P 1712.

³⁶⁵ *Id.* P 1769.

³⁶⁶ Order No. 2023-A, 186 FERC ¶ 61,199 at P 669.

more than 120 days and no less than 60 days before that date to establish the effective date of the Tariff [revisions].”³⁶⁷ PJM states that because it does not know the exact date that will occur, it seeks an indefinite effective date for the Tariff revisions it proposes in the instant compliance filing.

205. PJM asserts that the requested effective date ensures that the reforms proposed herein align, and do not interfere with, the Cycle process. PJM argues that the revised Tariff provisions becoming effective mid-Cycle would result in substantial administrative inefficiencies and create uncertainty for all parties as to how to reconcile overlapping and potentially inconsistent obligations. PJM further argues that requiring interconnection customers to retroactively modify interconnection requests to adapt to changing Tariff requirements could result in a violation of the filed rate doctrine.³⁶⁸

206. PJM requests that the Commission allow the proposed Tariff revisions regarding the elimination of the reasonable efforts standard and addition of study delay penalties to become effective on the third cluster Cycle after the effective date the Commission establishes for PJM’s Order No. 2023 compliance filings.³⁶⁹ PJM asserts that once the commencement date of this third cluster Cycle is known, PJM will make a filing no more than 120 days and no less than 60 days before that date to establish the effective date for the Tariff provisions through which PJM eliminates the reasonable efforts standard and proposes study delay penalties. PJM asserts that this is likely to be Cycle No. 5, the exact commencement date of which PJM does not know at this time. PJM requests that the requested indefinite effective date for these Tariff revisions remain until PJM submits its later compliance filing.

b. Protest

207. Shell Companies protest PJM’s proposed effective date of the third cluster study after the Commission-approved effective date for PJM’s compliance filing for elimination of the reasonable efforts standard.³⁷⁰ Shell Companies assert that PJM misunderstood the requirements of Order Nos. 2023 and 2023-A with respect to the elimination of reasonable efforts in interconnection study deadlines.³⁷¹ Shell Companies assert that Order No. 2023 requires the elimination of the reasonable efforts standard to

³⁶⁷ Second Compliance Filing at 47.

³⁶⁸ *Id.* at 48.

³⁶⁹ *Id.*

³⁷⁰ Shell Companies Protest at 2, 4.

³⁷¹ *Id.* at 4.

become effective with the first cluster study after the Commission-approved effective date of a transmission provider's compliance filing, while study delay penalties become effective with the third cluster study. Shell Companies explain that the Commission stated in Order No. 2023, "we expect transmission providers to meet the interconnection study deadlines once they are implementing the cluster study process" even as the Commission adopted a later implementation timeline for the study delay penalties, giving transmission providers until the third cluster study after the effective date of the compliance filing to assess study delay penalties.³⁷² Shell Companies request that PJM's proposed Tariff revisions related to the elimination of reasonable efforts become effective with the first cluster study.³⁷³

c. PJM Answer

208. PJM reiterates its request for an indefinite effective date for the proposed Tariff revisions to eliminate the use of reasonable efforts and maintains that its interpretation is consistent with the final rule.³⁷⁴ PJM contends that eliminating the reasonable efforts standard before study delay penalties apply makes little sense, and may raise questions concerning compliance and who is at fault for delays, which will require more administration and detract from service request processing and study completion efforts.

d. Commission Determination

209. We accept in part and reject in part PJM's proposal with respect to the requested effective dates. As an initial matter, we understand PJM's proposal as requesting all proposed Tariff revisions, except those regarding study delay penalties and the removal of the term "reasonable efforts," to become effective at the commencement of the next generator interconnection Cycle after the Commission's approval of PJM's proposed effective date for PJM's compliance filing, but that PJM is requesting an indefinite effective date at this time because it does not yet know the date when the next Cycle will start. We further understand PJM's proposal as requesting the Tariff revisions regarding study delay penalties and the removal of the term "reasonable efforts" to become effective at the commencement of the third generator interconnection Cycle after the Commission's approval of the proposed effective date for PJM's compliance filing, but that PJM is requesting an indefinite effective date because it does not yet know when that Cycle will start.

³⁷² *Id.* at 4-5 (quoting Order No. 2023, 184 FERC ¶ 61,054 at P 979).

³⁷³ *Id.* at 6.

³⁷⁴ PJM Answer at 15-16 n.69.

210. We accept PJM's proposal for the Tariff revisions to become effective at the commencement of the next Cycle after the issuance of this order.³⁷⁵ We find that PJM's proposed effective date, which aligns with the commencement of the next Cycle after the issuance of this order, complies with the requirements of Order Nos. 2023 and 2023-A. In Order No. 2023-A, the Commission clarified that transmission providers may propose effective dates in their compliance filings that align with their existing queue processing dates, such as the start of a new processing window, and explained that the Commission will consider these requests on a case-by-case basis.³⁷⁶ We find that PJM has sufficiently justified its proposal to align the effective date of its Tariff revisions (with the exception of those regarding study delay penalties and the removal of the term "reasonable efforts") with the commencement of the next Cycle, because as PJM explains, the Tariff revisions becoming effective mid-Cycle could result in substantial administrative inefficiencies and create uncertainty for all parties.³⁷⁷

211. However, we reject PJM's proposal requesting a later effective date for the Tariff revisions in Part VIII of PJM's Tariff to remove the term "reasonable efforts" and in section 438 of Part VIII of PJM's Tariff regarding study delay penalties. PJM's proposal to set a later effective date to align with the commencement of the third Cycle after the Commission-approved effective date for PJM's compliance filing for the Tariff revisions related to eliminating the reasonable efforts standard for conducting interconnection studies does not comply with the requirements of Order Nos. 2023 and 2023-A. Order No. 2023 provides that no study delay penalties shall be assessed until the third cluster study cycle after the Commission-approved effective date of the compliance filing, but also stated that the Commission "expect[s] transmission providers to meet the interconnection study deadlines once they are implementing the cluster study process."³⁷⁸ PJM's proposal does not comply with this requirement because it would maintain the use of the reasonable efforts standard, under which PJM would not be required to meet interconnection study deadlines, after implementation of the cluster study process.³⁷⁹

³⁷⁵ We note that based on the "Cycle Timeline" published on PJM's website and PJM's Cycle process in which the application window of the next Cycle opens at the beginning of Phase II of the prior Cycle, we expect that PJM's proposed effective date will be sometime around end of January 2027, which is the projected timeline for the beginning of Phase II of Cycle No. 1. PJM Interconnection, L.L.C., *Planning* (Mar. 18, 2026), <https://www.pjm.com/planning>.

³⁷⁶ Order No. 2023-A, 186 FERC ¶ 61,199 at P 669.

³⁷⁷ Second Compliance Filing at 48.

³⁷⁸ Order No. 2023, 184 FERC ¶ 61,054 at P 979.

³⁷⁹ We note that PJM's proposed Tariff provisions for study delay penalties reflect

212. Because we reject PJM's proposal for a later effective date for Tariff revisions related to the elimination of the reasonable efforts standard and study delay penalties, we accept all of PJM's proposed Tariff revisions (including the revisions related to the elimination of the reasonable efforts standard and study delay penalties) to become effective at the same date.³⁸⁰

213. PJM commits to making a filing no more than 120 days and no less than 60 days before the commencement date of the next Cycle after the issuance of this order to establish the effective date of the Tariff revisions. We direct PJM to make a further compliance filing in this docket no more than 120 days and no less than 60 days before the proposed effective date, as PJM proposes to do. Specifically, PJM is required to make a further compliance filing in this docket through the Commission's eTariff system with the accepted tariff record text that establishes the actual effective date of the Tariff records as the date of the commencement of the next Cycle after the issuance of this order and designates the records accepted in this order as OBE (overtaken by events).³⁸¹

16. Compliance Directive From Errata Notice

a. First Compliance Order

214. On August 20, 2024, the Commission issued an Errata Notice, which contained additional revisions to the Commission's *pro forma* LGIP, *pro forma* LGIA, and

the allowed delay in implementation of study delay penalties. See PJM Tariff, pt. VIII, subpt. K, § 438 (Penalties for Failure to Meet Study Deadlines) (0.0.0) ("The penalty regime under this section 438 shall not be implemented until the start of studies for the third Cycle after the Commission-approved effective date of Transmission Provider's filing made in compliance with the Final Rule in Docket No. RM22-14-000."). Because this timing is reflected in the text of the Tariff provision, there is no need to delay the effective date of the Tariff provision.

³⁸⁰ We note that for tariff records where PJM has filed multiple versions of the same Tariff provisions (with the higher-numbered version including revisions related to reasonable efforts), we accept only the higher-numbered version of the tariff record and reject the lower-numbered version of the tariff record.

³⁸¹ PJM must make a compliance filing using Type of Filing Code 80 in this docket by including the associated filing identifier (`associated_filing_id`) for this filing at the filing level. The filing must include tariff records with the effective date for the previously-accepted tariff records and also include, at the tariff record level, the associated filing identifier (`associated_filing_id`), associated record id (`associated_record_id`), and associated option code (`associated_option_code`) of the original tariff records accepted with a 12/31/9998 date.

pro forma SGIA.³⁸² In the First Compliance Order, the Commission directed PJM to incorporate the revisions made in the Errata Notice when it submits its further compliance filing.³⁸³

b. Second Compliance Filing

215. PJM asserts that no additional Tariff revisions were needed to reflect the changes to the *pro forma* LGIP and *pro forma* LGIA the Commission made in its Errata Notice, because “there is no overlap between PJM’s Order No. 2023 Tariff revisions and the *pro forma* LGIP and LGIA provisions affected by the [Errata Notice].”³⁸⁴

c. Commission Determination

216. We find that PJM complies with the Commission’s directive in the First Compliance Order, because PJM explains that its proposed Tariff revisions in compliance with Order Nos. 2023 and 2023-A do not overlap with the *pro forma* LGIP and *pro forma* LGIA provisions affected by the Errata Notice.

The Commission orders:

(A) PJM’s Second Compliance Filing is hereby accepted in part and rejected in part, effective as requested, subject to a further compliance filing, as discussed in the body of this order.

(B) PJM is hereby directed to submit a compliance filing that addresses the directives in this order within 60 days of the date of this order, as discussed in the body of this order.

³⁸² *Improvements to Generator Interconnection Procs. & Agreements*, Errata Notice, 188 FERC ¶ 61,134.

³⁸³ First Compliance Order, 192 FERC ¶ 61,077 at P 329.

³⁸⁴ Second Compliance Filing at 4 n.9.

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(C) PJM is directed to make a compliance filing to establish the effective date of the tariff records as discussed in the body of the order.

By the Commission. Commissioner Chang is concurring with a separate statement attached.

(S E A L)

Carlos D. Clay,
Deputy Secretary.

Appendix – Tariff Records

PJM Interconnection, L.L.C. Intra-PJM Tariffs

Tariff Records Accepted Effective December 31, 9998:

- [400 A, OATT 400 Definitions A \(3.0.0\)](#)
- [400 B, OATT 400 Definitions B \(1.0.0\)](#)
- [400 D, OATT 400 Definitions D \(1.0.0\)](#)
- [400 N, OATT 400 Definitions N \(3.0.0\)](#)
- [400 P, OATT 400 Definitions P \(3.0.0\)](#)
- [400 R, OATT 400 Definitions R \(5.0.0\)](#)
- [400 S, OATT 400 Definitions S \(4.0.0\)](#)
- [400 T, OATT 400 Definitions T \(2.0.0\)](#)
- [401, OATT Part VIII.A 401 Applications for Cycle Process Intro \(3.0.0\)](#)
- [402, OATT Part VIII.A 402 Applications for Cycle Process, Site Co \(3.0.0\)](#)
- [403, OATT Part VIII.B 403 Application Rules \(2.0.0\)](#)
- [404, OATT Part VIII.C 404 Introduction \(2.0.0\)](#)
- [405, OATT Part VIII.C 405 Phase I \(1.0.0\)](#)
- [406, OATT Part VIII.C 406 Decision Point I \(3.0.0\)](#)
- [407, OATT Part VIII.C 407 Phase II \(2.0.0\)](#)
- [408, OATT Part VIII.C 408 Decision Point II \(4.0.0\)](#)
- [409, OATT Part VIII.C 409 Phase III \(2.0.0\)](#)
- [410, OATT Part VIII.C 410 Decision Point III \(3.0.0\)](#)
- [411, OATT Part VIII.D 411 Final Agreement Negotiation Phase \(2.0.0\)](#)
- [414, OATT Part VIII.E 414 Surplus Interconnection Service \(3.0.0\)](#)
- [431, OATT Part VIII.E 431 Interconnection Studies Processing Time \(1.0.0\)](#)
- [434, OATT Part VIII.G 434 Affected System Rules \(4.0.0\)](#)
- [435, OATT Part VIII.H 435 Upgrade Requests \(3.0.0\)](#)
- [VIII Subpart K, OATT VIII Subpart K Penalties for Failure to Meet Study Dead \(0.0.0\)](#)
- [438, OATT Part VIII.K 438 Penalties for Failure to Meet Study Dea \(0.0.0\)](#)
- [439 - 499, OATT Part VIII 439 - 499 Reserved \(3.0.0\)](#)
- [IX Subpart A, OATT Part IX Subpart A FORM OF APPLICATION AND STUDIES AGRMT \(3.0.0\)](#)
- [IX.B GIA, OATT Part IX.B GIA \(4.0.0\)](#)
- [IX.B GIA Appx-Sched, OATT Part IX.B GIA Appendices and Schedules \(3.0.0\)](#)
- [IX.B GIA Schedule H, OATT Part IX.B GIA Schedule H \(1.0.0\)](#)

- [IX Subpart G, OATT Part IX Subpart G FORM OF NECESSARY STUDIES AGREEMENT \(2.0.0\)](#)
- [IX Subpart I, OATT IX Subpart I FORM OF SURPLUS INTERCONNECTION SERV STUDY \(2.0.0\)](#)
- [IX Subpart O, OATT IX Subpart O Form of Affected System Customer Impact S \(0.0.0\)](#)

Tariff Records Rejected:

- [403, OATT Part VIII.B 403 Application Rules \(1.0.0\)](#)
- [406, OATT Part VIII.C 406 Decision Point I \(2.0.0\)](#)
- [407, OATT Part VIII.C 407 Phase II \(1.0.0\)](#)
- [408, OATT Part VIII.C 408 Decision Point II \(3.0.0\)](#)
- [409, OATT Part VIII.C 409 Phase III \(1.0.0\)](#)
- [414, OATT Part VIII.E 414 Surplus Interconnection Service \(2.0.0\)](#)
- [434, OATT Part VIII.G 434 Affected System Rules \(3.0.0\)](#)
- [IX.B GIA Specs, OATT Part IX.B GIA Specs \(3.0.0\)](#)
- [IX.B GIA Schedule N, OATT Part IX.GIA Schedule N \(0.0.0\)](#)
- [IX.C WMPA Schedules A-F, OATT Part IX.C WMPA Schedules A-F \(1.0.0\)](#)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.

Docket No. ER24-2045-004

(Issued April 16, 2026)

CHANG, Commissioner, *concurring*:

1. I concur in today's order on PJM Interconnection, L.L.C.'s (PJM) Order No. 2023 compliance filing. I write separately to highlight the broader concerns that have emerged across recent interconnection matters in PJM. These issues, reflected in *RWE*¹ and *Amelia*,² underscore the importance of ensuring that PJM's interconnection study procedures and network upgrade cost allocation practices are clearly grounded in its filed tariff. I strongly encourage PJM to take the opportunity to bring clarity, transparency, and predictability to its interconnection process as it prepares for its next compliance filing in response to today's order.

2. In *RWE*, the Commission addressed a complaint regarding PJM's application of network upgrade cost assignment concepts that were reflected primarily in the PJM manuals. In that case, the developer raised concerns that PJM relied on internal methods and interpretations, rather than tariff-specified criteria, to determine both the scope of necessary network upgrades and the extent of RWE's cost responsibility for those network upgrades.³ This level of unpredictability and variation not only made it difficult for the developer to understand and validate PJM's determinations but also complicated the Commission's review.

3. Similarly, in *Amelia*, the record reflected PJM's use of "regional topology upgrades" and a corresponding discount factor method for assigning network upgrade costs. These approaches are not well defined in the tariff or manuals, which in turn left developers uncertain as to how network upgrade decisions were made or how the costs of those network upgrades were assigned. The Commission agreed with PJM that the use of this type of analysis was consistent with the tariff's requirement that PJM allocate costs "pursuant to each New Service Request's contribution to the reliability violation

¹ *RWE Clean Energy, LLC vs PJM Interconnection, L.L.C.*, 194 FERC ¶ 61,212 (2026) (*RWE*).

² *PJM Interconnection, L.L.C.*, 195 FERC ¶ 61,024 (2026) (*Amelia*).

³ *RWE*, 194 FERC ¶ 61,212 at P 12.

identified on the transmission system.”⁴ But, even though the analysis performed by PJM was consistent with its tariff requirements, the developers in this study group still faced uncertainty regarding both the cost and timing of network upgrades as PJM determined the least-cost regional solutions to address the reliability violations caused by the cluster, which resulted in the elimination of otherwise-required network upgrades.⁵

4. The questions raised in these cases are closely connected to the issues now before the Commission in PJM’s Order No. 2023 compliance filing. In this proceeding, PJM proposes to use a proportional impact method for network upgrade cost allocation that stakeholders argue is unclear and could assign network upgrade costs to projects with little or no actual contribution to the underlying reliability violation. The compliance order directs further compliance from PJM to provide tariff revisions that describe “how the costs of each system network upgrade type will be allocated among the interconnection customers within the cluster that are shown through technical analyses to contribute to the need for that discrete network upgrade.”⁶

5. Taken together, *RWE*, *Amelia*, and the Commission’s directives in today’s order reveal a consistent theme: PJM’s interconnection process will benefit from clearer, more transparent, and more tariff-anchored study procedures. As PJM develops its next compliance filing, I encourage PJM to ensure that the proposed study methods, network upgrade selection logic, and network upgrade cost allocation framework are clear and well-described in its tariff. Providing developers with a stable and predictable set of tariff-based rules will reduce the likelihood of disputes like those seen in *RWE* and *Amelia*, support more efficient administration of the queue, and ultimately promote a more durable and equitable interconnection process.

For these reasons, I respectfully concur.



Judy W. Chang
Commissioner

⁴ *Amelia*, 195 FERC ¶ 61,024 at P 70.

⁵ *Id.* P 28.

⁶ *PJM Interconnection, L.L.C.*, 195 FERC ¶ 61,031, at P 70 (2026).

Document Content (s)

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