

169 FERC ¶ 61,223
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Richard Glick and Bernard L. McNamee.

PacifiCorp

Docket Nos. ER19-1948-000
ER19-1948-001

ORDER ON COMPLIANCE

(Issued December 19, 2019)

1. On May 22, 2019, as amended on July 15, 2019, PacifiCorp submitted proposed revisions to its Open Access Transmission Tariff (Tariff) in compliance with the requirements of Order Nos. 845 and 845-A,¹ which amended the Commission's *pro forma* Large Generator Interconnection Agreement (LGIA) and *pro forma* Large Generator Interconnection Procedures (LGIP).² As discussed below, we find that PacifiCorp's compliance filing partially complies with the requirements of Order Nos. 845 and 845-A. Accordingly, we accept PacifiCorp's compliance filing, effective May 22, 2019, and direct PacifiCorp to submit a further compliance filing within 60 days of the date of this order.

I. Background

2. On April 19, 2018, the Commission issued Order No. 845, which revised the Commission's *pro forma* LGIA and the *pro forma* LGIP to improve certainty for interconnection customers, promote more informed interconnection decisions, and enhance the interconnection process. The Commission stated that it expects that these reforms will provide interconnection customers better information and more options for obtaining interconnection service, and as a result, there will be fewer overall

¹ *Reform of Generator Interconnection Procedures and Agreements*, Order No. 845, 163 FERC ¶ 61,043 (2018), *errata notice*, 167 FERC ¶ 61,123, *order on reh'g*, Order No. 845-A, 166 FERC ¶ 61,137 (2019), *errata notice*, 167 FERC ¶ 61,124, *order on reh'g*, Order No. 845-B, 168 FERC ¶ 61,092 (2019).

² 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 large generating facilities. Order No. 845, 163 FERC ¶ 61,043 at P 6.

interconnection requests and fewer interconnection requests failing to reach commercial operation. The Commission also stated that it expects that, as a result of these reforms, transmission providers will be able to focus resources on those interconnection requests most likely to reach commercial operation.³ In Order No. 845-A, the Commission generally upheld the reforms it required in Order No. 845 but granted certain requests for rehearing and clarification.

3. In Order No. 845, the Commission adopted 10 different reforms in three categories to improve the interconnection process. First, in order to improve certainty for interconnection customers, the Commission: (1) removed the limitation that interconnection customers may exercise the option to build the transmission provider's interconnection facilities⁴ and stand alone network upgrades⁵ only in instances when the transmission provider cannot meet the dates proposed by the interconnection customer;⁶ and (2) required that transmission providers establish interconnection dispute resolution procedures that allow a disputing party unilaterally to seek non-binding dispute resolution.⁷

4. Second, to promote more informed interconnection decisions, the Commission: (1) required transmission providers to outline and make public a method for determining

³ *Id.* P 2; Order No. 845-A, 166 FERC ¶ 61,137 at P 1.

⁴ Transmission provider's interconnection facilities are "all facilities and equipment owned, controlled or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades." *Pro forma* LGIA art. 1 (Definitions).

⁵ Stand alone network upgrades are "Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the Transmission System during their construction. Both the Transmission Provider and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement." *Id.*

⁶ Order No. 845, 163 FERC ¶ 61,043 at P 85.

⁷ *Id.* P 3.

contingent facilities;⁸ (2) required transmission providers to list the specific study processes and assumptions for forming the network models used for interconnection studies; (3) revised the definition of “Generating Facility” to explicitly include electric storage resources; and (4) established reporting requirements for aggregate interconnection study performance.⁹

5. Third, the Commission adopted reforms to enhance the interconnection process by: (1) allowing interconnection customers to request a level of interconnection service that is lower than their generating facility capacity; (2) requiring transmission providers to allow for provisional interconnection agreements that provide for limited operation of a generating facility prior to completion of the full interconnection process; (3) requiring transmission providers to create a process for interconnection customers to use surplus interconnection service¹⁰ at existing points of interconnection; and (4) requiring transmission providers to set forth a procedure to follow when assessing and, if necessary, studying an interconnection customer’s technology changes without affecting the interconnection customer’s queue position.¹¹

II. PacifiCorp’s Compliance Filing

6. PacifiCorp states that it proposes revisions to its LGIP, which is incorporated into its Tariff in Sections 36 through 48, and to the appendices to its LGIP contained in Attachment N. PacifiCorp states that its proposed revisions to Attachment N include revisions to its *pro forma* LGIA in Appendix 6 and the addition of a new Appendix 8 incorporating a Technological Advancement Study Agreement.

⁸ Contingent facilities are “those unbuilt Interconnection Facilities and Network Upgrades upon which the Interconnection Request’s costs, timing, and study findings are dependent, and if delayed or not built, could cause a need for Re-Studies of the Interconnection Request or a reassessment of the Interconnection Facilities and/or Network Upgrades and/or costs and timing.” *Pro Forma* LGIP § 1 (Definitions).

⁹ Order No. 845, 163 FERC ¶ 61,043 at P 4.

¹⁰ Order No. 845 added a definition for “Surplus Interconnection Service” to Section 1 of the *pro forma* LGIP and article 1 of the *pro forma* LGIA, defining the term as “any unused portion of Interconnection Service established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service is utilized the Interconnection Service limit at the Point of Interconnection would remain the same.” *Id.* P 459.

¹¹ *Id.* P 5.

7. PacifiCorp states that it has adopted without modification the following LGIP and *pro forma* LGIA reforms: interconnection customer's option to build, non-binding dispute resolution, transparency regarding study models and assumptions, definition of contingent facilities, definition of generating facility, and requesting interconnection service below generating facility capacity. PacifiCorp also proposes modifications to comply with the following Order Nos. 845 and 845-A *pro forma* LGIP and *pro forma* LGIA reforms: identification of contingent facilities, interconnection study deadlines, provisional interconnection service, utilization of surplus interconnection service, and material modifications and incorporation of advanced technologies. PacifiCorp also states that it has submitted additional ministerial, non-substantive revisions to its Tariff, apart from those specifically required by Order Nos. 845 and 845-A. PacifiCorp states that these modifications meet the Commission's "consistent with or superior to" standard for modifications to *pro forma* provisions, and should be permitted.

8. PacifiCorp requests that its proposed revisions become effective on May 22, 2019.

III. Notice and Responsive Pleadings

9. Notice of PacifiCorp's compliance filing was published in the *Federal Register*, 84 Fed. Reg. 24,770 (2019), with interventions and protests due on or before June 12, 2019. On June 13, 2019, the comment period was extended until and including June 26, 2019.¹²

10. On June 13, 2019, Commission staff issued a deficiency letter that requested additional clarification regarding PacifiCorp's procedure for allowing surplus interconnection service (Deficiency Letter). On July 15, 2019, PacifiCorp filed its response to the Deficiency Letter (Deficiency Response), which proposed additional revisions to Section 38 of its Tariff and Appendices 1 and 3 of its Attachment N (July 15, 2019 Amendment). Notice of PacifiCorp's Deficiency Response and July 15, 2019 Amendment was published in the *Federal Register*, 84 Fed. Reg. 35,383 (2019), with interventions and protests due on or before August 5, 2019.

11. Timely motions to intervene were filed by Avangrid Renewables, LLC and American Wind Energy Association. Timely motions to intervene and protests were filed by First Solar, Inc. (First Solar), Interwest Energy Alliance and Renewable Northwest (together, Joint Renewable Associations), Northwest & Intermountain Independent Power Producers (Northwest & Intermountain IPPs), Western Power Trading Forum, and Oregon Windfarms, LLC (Oregon Windfarms). First Solar filed an answer on July 16, 2019, and PacifiCorp filed an answer on July 17, 2019.

¹² Notice Granting Extension of Time, Docket No. ER19-1948-000 (June 13, 2019).

IV. Discussion

A. Procedural Matters

12. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2019), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

13. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2019), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We accept First Solar's and PacifiCorp's answers because they have provided information that assisted us in our decision-making process.

B. Substantive Matters

14. As discussed below, we find that PacifiCorp's filing partially complies with the requirements of Order Nos. 845 and 845-A. Accordingly, we accept PacifiCorp's compliance filing, effective May 22, 2019, and direct PacifiCorp to submit a further compliance filing within 60 days of the date of this order.

1. Proposed Variations

15. As discussed further below, PacifiCorp has requested certain variations from the Commission's requirements in Order Nos. 845 and 845-A. The Commission explained in Order No. 845 that such variations would be reviewed under the same standard allowed by Order No. 2003.¹³ In Order No. 2003, when adopting the *pro forma* LGIA and LGIP, the Commission permitted transmission providers to seek variations from the *pro forma* LGIP and/or *pro forma* LGIA if they were "consistent with or superior to" the terms of the *pro forma* LGIP and *pro forma* LGIA.¹⁴ A transmission provider seeking a "consistent with or superior to" variation must demonstrate why its proposal is consistent with or superior to the *pro forma* LGIP and/or *pro forma* LGIA.¹⁵ The Commission also permitted transmission providers to justify a variation to the *pro forma* LGIP or *pro forma* LGIA based on regional reliability requirements and required transmission

¹³ Order No. 845, 163 FERC ¶ 61,043 at P 43.

¹⁴ *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 104 FERC ¶ 61,103, at P 825 (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 Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007).

¹⁵ *See, e.g., Nev. Power Co.*, 167 FERC ¶ 61,086, at P 3 (2019).

providers submitting such regional reliability variations to the Commission for approval to identify the proposed variations and explain why such variations are necessary.¹⁶ We will evaluate PacifiCorp's proposed variations from the requirements of Order Nos. 845 and 845-A accordingly.

2. Interconnection Customer's Option to Build

16. In Order No. 845, the Commission revised articles 5.1, 5.1.3, and 5.1.4 of the *pro forma* LGIA to allow interconnection customers to unilaterally exercise the option to build for stand alone network upgrades and the transmission provider's interconnection facilities, regardless of whether the transmission provider can complete construction of such facilities by the interconnection customer's proposed in-service date, initial synchronization date, or commercial operation date.¹⁷ Prior to Order No. 845, this option to build was available to an interconnection customer only if the transmission provider did not agree to the interconnection customer's preferred construction timeline.¹⁸ The Commission stated in Order No. 845 that this reform of the option to build will "benefit the interconnection process by providing interconnection customers more control and certainty during the design and construction phases of the interconnection process."¹⁹

17. In Order No. 845-A, the Commission granted rehearing and clarification of certain aspects of the revised option to build. Specifically, the Commission revised the definition of stand alone network upgrade in the *pro forma* LGIP and *pro forma* LGIA to: (1) state that, when there is a disagreement, the transmission provider must provide the interconnection customer a written technical explanation outlining why the transmission provider does not consider a specific network upgrade to be a stand alone network upgrade;²⁰ and (2) clarify that the option to build does not apply to stand alone network upgrades on affected systems.²¹ The Commission also made revisions to article 5.2 of the *pro forma* LGIA to allow transmission providers to recover oversight costs related to

¹⁶ Order No. 2003, 104 FERC ¶ 61,103 at P 826; Order No. 2003-A, 106 FERC ¶ 61,220 at P 45.

¹⁷ Order No. 845, 163 FERC ¶ 61,043 at PP 85-87.

¹⁸ Order No. 2003, 104 FERC ¶ 61,103 at P 353; *see also pro forma* LGIP § 5.1.3.

¹⁹ Order No. 845, 163 FERC ¶ 61,043 at P 85.

²⁰ Order No. 845-A, 166 FERC ¶ 61,137 at P 68.

²¹ *Id.* P 61.

the interconnection customer's option to build.²² In addition, the Commission clarified that the revised option to build provisions apply to all public utility transmission providers, including those that reimburse the interconnection customer for network upgrades.²³

a. PacifiCorp's Compliance Filing

18. PacifiCorp proposes revisions to Section 1 of its LGIP and articles 1, 5.1, 5.1.3, 5.1.4, and 5.2 (12) of its *pro forma* LGIA to incorporate the *pro forma* LGIP and *pro forma* LGIA provisions adopted by Order Nos. 845 and 845-A without modification.²⁴

b. Commission Determination

19. We find that PacifiCorp's proposed revisions regarding the option to build comply with the requirements of Order Nos. 845 and 845-A because PacifiCorp adopts the *pro forma* LGIA and *pro forma* LGIP revisions adopted by Order Nos. 845 and 845-A without modification.

3. Dispute Resolution

20. In Order No. 845, the Commission revised the *pro forma* LGIP by adding new Section 13.5.5, which establishes generator interconnection dispute resolution procedures that allow a disputing party to unilaterally seek non-binding dispute resolution.²⁵ The Commission established these new procedures because dispute resolution was previously unavailable when the parties did not mutually agree to pursue a binding arbitration under Section 13.5 of the pre-Order No. 845 *pro forma* LGIP. The Commission further explained that participation in the new non-binding dispute resolution process in *pro forma* LGIP Section 13.5.5 does not preclude disputing parties from pursuing binding arbitration after the conclusion of the non-binding dispute resolution process if they seek a binding result.²⁶

²² *Id.* P 75.

²³ *Id.* P 33.

²⁴ PacifiCorp May 22, 2019 Compliance Filing at 2 (Filing); *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 6, art. 5.1, 5.1.3, 5.1.4, and 5.2 (12).

²⁵ Order No. 845, 163 FERC ¶ 61,043 at P 133; *see also pro forma* LGIP § 13.5.5.

²⁶ Order No. 845, 163 FERC ¶ 61,043 at P 139.

a. **PacifiCorp's Compliance Filing**

21. PacifiCorp proposes revisions to its LGIP that amend Section 48.5.5 of its Tariff to incorporate the *pro forma* LGIP provision adopted by Order No. 845 without modification.²⁷

b. **Commission Determination**

22. We find that PacifiCorp's proposed LGIP revisions regarding dispute resolution comply with the requirements of Order Nos. 845 and 845-A because PacifiCorp adopts the Commission's *pro forma* revisions without modification.

4. **Identification and Definition of Contingent Facilities**

23. In Order No. 845, the Commission added a new definition to Section 1 of the *pro forma* LGIP, providing that contingent facilities shall mean those unbuilt interconnection facilities and network upgrades upon which the interconnection request's costs, timing, and study findings are dependent, and if delayed or not built, could cause a need for restudies of the interconnection request or a reassessment of the interconnection facilities and/or network upgrades and/or costs and timing.²⁸ The Commission also added new Section 3.8 to the *pro forma* LGIP, which requires transmission providers to include, within Section 3.8, a method for identifying the contingent facilities that they will provide to the interconnection customer at the conclusion of the system impact study and include in the interconnection customer's generator interconnection agreement.²⁹ The Commission specified that the method must be sufficiently transparent to determine why a specific contingent facility was identified and how it relates to the interconnection request.³⁰ The Commission stated that this transparency will ensure that the method is applied on a non-discriminatory basis.³¹ The Commission further required that transmission providers provide, upon the interconnection customer's request, the estimated network upgrade costs and estimated in-service completion date associated

²⁷ Filing at 2-3; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.48, Miscellaneous (1.0.0), § 48.5.5.

²⁸ Order No. 845, 163 FERC ¶ 61,043 at P 218; *see also pro forma* LGIP § 1 (Definitions).

²⁹ Order No. 845, 163 FERC ¶ 61,043 at P 199.

³⁰ *Id.*; *see also pro forma* LGIP § 3.8.

³¹ Order No. 845, 163 FERC ¶ 61,043 at P 200.

with each identified contingent facility when this information is readily available and not commercially sensitive.³²

a. PacifiCorp's Compliance Filing

24. PacifiCorp proposes to revise its LGIP to define contingent facilities as those unbuilt interconnection facilities and network upgrades upon which the interconnection request's costs, timing, and study findings are dependent, and if delayed or not built, could cause a need for re-studies of the interconnection request or a reassessment of the interconnection facilities and/or network upgrades and/or costs and timing.³³ PacifiCorp also proposes revisions to its LGIP to add a new Section 38.8 to its Tariff providing a method for the identification of contingent facilities. PacifiCorp's proposed revisions state that PacifiCorp uses a serial-queue order study methodology for processing interconnection requests, which includes starting each interconnection study with the baseline assumption that the following are in-service: (1) generating facilities that are directly interconnected to PacifiCorp's transmission system; (2) generating facilities that are interconnected to affected systems and may impact the interconnection request; (3) generating facilities that have a pending higher queued interconnection request and their associated interconnection facilities and network upgrades; (4) generating facilities that have no queue position, but have executed an interconnection agreement or requested that an unexecuted interconnection agreement be filed with the Commission, and their associated interconnection facilities and network upgrades; (5) pending and granted requests for transmission service and their associated facilities or upgrade requirements to the extent they have an impact on the interconnection request; and (6) PacifiCorp's transmission expansion plan components, or the transmission expansion plan components of third-party transmission providers, to the extent they have an impact on the interconnection request.³⁴

25. PacifiCorp's proposed revisions also state that PacifiCorp will identify the interconnection study's assumed, unbuilt facilities and upgrades upon which the interconnection request's costs, timing, and study findings are dependent, and if delayed or not built, could cause a need for re-studies of the interconnection request or a reassessment of needed interconnection facilities, network upgrades, or costs and timing. Tariff Section 38.8 provides that this set of facilities and upgrades will be listed as the contingent facilities in an appendix to the system impact study report. If readily available

³² *Id.* P 199; *see also pro forma* LGIP § 3.8.

³³ Filing at 3; PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.36, Definitions (2.0.0) (defining “Contingent Facilities”).

³⁴ Filing at 3; PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.8.

and not commercially sensitive, PacifiCorp will also provide an estimate of the costs and in-service date for each contingent facility.³⁵

26. PacifiCorp states that it also proposes to add a contingent facilities placeholder in the body of Appendix A of the LGIA, where contingent facilities will be listed, and to update the appendix header accordingly.³⁶

b. Commission Determination

27. We find that the revised provisions that identify and describe PacifiCorp's method for determining contingent facilities, as PacifiCorp proposes in its LGIP, partially comply with the requirements of Order Nos. 845 and 845-A. We find that PacifiCorp complies with the requirements of Order Nos. 845 and 845-A because PacifiCorp has adopted the definition of contingent facilities and the language regarding the need for the transmission provider to include in LGIP Section 3.8 a method for identification of contingent facilities without modification. Further, PacifiCorp's proposed Tariff revisions comply with the requirements related to providing estimated network upgrade costs and estimated in-service completion dates associated with contingent facilities to the interconnection customer.

28. However, as specified in Order No. 845, transmission providers must include, in Section 3.8 of their LGIPs, a method for determining contingent facilities.³⁷ The Commission required that this method must provide sufficient transparency to determine why a specific contingent facility was identified and how it relates to the interconnection request.³⁸ The Commission also required that a transmission provider's method to identify contingent facilities be transparent enough to ensure that it will be applied on a non-discriminatory basis.³⁹ PacifiCorp's proposed Tariff revisions lack the requisite transparency required by Order Nos. 845 and 845-A because the proposed Tariff revisions do not detail the specific technical screens or analyses and the specific thresholds or criteria that PacifiCorp will use as part of its method to identify contingent

³⁵ Filing at 3-4; PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.8.

³⁶ Filing at 4; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, Attachment N, Appendices to Large Generator Interconnection Procedures (8.1.0), app. 6, app. A.

³⁷ Order No. 845, 163 FERC ¶ 61,043 at P 199.

³⁸ *Id.* P 200.

³⁹ *Id.*

facilities.⁴⁰ Without this information, an interconnection customer will not understand how PacifiCorp will evaluate potential contingent facilities to determine their relationship to an individual interconnection request.⁴¹ Further, including provisions regarding specific thresholds or criteria in PacifiCorp's LGIP will ensure PacifiCorp's technical screens or analyses will be applied to interconnection requests on a consistent, not unduly discriminatory or preferential basis. Accordingly, we direct PacifiCorp to file, within 60 days of the date of this order, a further compliance filing that includes in Section 38.8 of its LGIP the method it will use to determine contingent facilities, including technical screens or analyses it proposes to use to identify these facilities. We also require that PacifiCorp include in Section 38.8 of its LGIP, the specific thresholds or criteria it will use in its technical screens or analysis to achieve the level of transparency required by Order No. 845.

29. Additionally, as part of the method for determining contingent facilities required by Order No. 845,⁴² PacifiCorp proposes to use a serial-queue order study methodology for studying interconnection requests, which presumes, *inter alia*, that "generating facilities that have no Queue Position but have executed an interconnection agreement, or requested that an unexecuted interconnection agreement be filed with FERC, and their associated Interconnection Facilities and Network Upgrades" are in service. We find that PacifiCorp has not explained how an interconnection customer can have no queue position, yet have an interconnection agreement with interconnection facilities and network upgrades. Accordingly, we direct PacifiCorp to file, within 60 days of the date of this order, a further compliance filing that includes an explanation regarding what constitutes a generating facility with no queue position.

5. Transparency Regarding Study Models and Assumptions

30. In Order No. 845, the Commission revised Section 2.3 of the *pro forma* LGIP to require transmission providers to maintain network models and underlying assumptions on either an Open Access Same-Time Information System (OASIS) site or a password-protected website. If the transmission provider posts this information on a password-protected website, a link to the information must be provided on its OASIS site. Revised *pro forma* LGIP Section 2.3 also requires that "network models and underlying assumptions reasonably represent those used during the most recent interconnection study

⁴⁰ The Commission declined to implement a standard threshold or criteria, such as a specific distribution factor threshold, because different thresholds may be more appropriate for different queue types and geographical footprints. *Id.* P 220.

⁴¹ *See pro forma* LGIP § 3.8 ("The method shall be sufficiently transparent to determine why a specific Contingent Facility was identified").

⁴² Order No. 845, 163 FERC ¶ 61,043 at P 199.

and be representative of current system conditions.”⁴³ In addition, the Commission revised *pro forma* LGIP Section 2.3 to allow transmission providers to require interconnection customers, OASIS site users, and password-protected website users to sign a confidentiality agreement before the release of commercially sensitive information or critical energy infrastructure information (CEII).⁴⁴

31. In Order No. 845-A, the Commission reiterated that neither the Commission’s CEII regulations nor Order No. 845 precludes a transmission provider from taking necessary steps to protect information within its custody or control to ensure the safety and security of the electric grid.⁴⁵ The Commission also clarified that, to the extent any party would like to use the Commission’s CEII regulations as a model for evaluating entities that request network model information and assumptions (prior to signing a non-disclosure agreement), it may do so.⁴⁶ The Commission further clarified that the phrase “current system conditions” does not require transmission providers to maintain network models that reflect current real-time operating conditions of the transmission provider’s system. Instead, the network model information should reflect the system conditions currently used in interconnection studies.⁴⁷

a. PacifiCorp’s Compliance Filing

32. PacifiCorp proposes revisions to its LGIP amending Section 37.3 of its Tariff to incorporate the *pro forma* LGIP provisions adopted by Order Nos. 845 and 845-A without modification.⁴⁸

33. In addition to these Tariff revisions, PacifiCorp states that it has published on its OASIS, in tandem with the instant compliance filing,⁴⁹ a draft business practice (Business Practice No. 73) for comment by stakeholders that details the study models and

⁴³ Order No. 845, 163 FERC ¶ 61,043 at P 236.

⁴⁴ *Id.*; see also *pro forma* LGIP § 2.3.

⁴⁵ Order No. 845-A, 166 FERC ¶ 61,137 at P 84 (citing Order No. 845, 163 FERC ¶ 61,043 at P 241).

⁴⁶ *Id.* P 85 (citing 18 C.F.R. § 388.113(g)(5)(i) (2019)).

⁴⁷ *Id.* P 88.

⁴⁸ Filing at 4; see PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.37, Scope and Application (2.0.0), § 37.3.

⁴⁹ PacifiCorp Answer at 2.

assumptions when modeled generation exceeds study area load.⁵⁰ PacifiCorp asserts that the new draft business practice describes the circumstances under which an interconnection customer may receive a “non-viable” study result because the amount of existing generation and higher-queued generator interconnection requests that must be assumed in-service for purposes of the study so far exceed study area load that there are no network upgrade solutions that PacifiCorp can identify to allow the interconnection request to be granted. PacifiCorp states that it will perform a restudy of any request that receives a “non-viable” study result when system conditions change enough to allow the system to absorb additional power. PacifiCorp contends that Business Practice No. 73 should increase transparency by developing a common understanding of the generation and load conditions that are assumed in, and can affect, interconnection study results, and will help customers avoid entering the queue with non-viable interconnection requests.⁵¹

b. Protests/Comments

34. No protests or comments were filed with regard to PacifiCorp’s proposed revisions to Section 37.3 of its Tariff. However, Joint Renewable Associations, Western Power Trading Forum, First Solar, Oregon Windfarms, and Northwest & Intermountain IPPs submitted protests raising concerns regarding PacifiCorp’s new Business Practice No. 73, which became effective on June 3, 2019. These protesters assert that Business Practice No. 73 is fundamentally at odds with the goals of Order No. 845, including Order No. 845’s requirement for study transparency.⁵² Specifically, they argue that Business Practice No. 73 is not transparent because it lacks sufficient information about the study models and assumptions used to determine that an interconnection request is “non-viable,” and that it allows PacifiCorp to unilaterally make that determination.⁵³

35. Northwest & Intermountain IPPs argue that Business Practice No. 73 effectively treats a technical issue – how to model power flows in a balancing authority area where generation in the queue exceeds the balancing authority area’s load – as an absolute bar to transmission access. Northwest & Intermountain IPPs further assert that the business practice allows PacifiCorp to “ring-fence” its transmission system, which will prevent projects that wish to locate within PacifiCorp’s footprint but serve load elsewhere from

⁵⁰ Filing at 5. PacifiCorp did not include the text of draft Business Practice No. 73 in its compliance filing.

⁵¹ *Id.* (citing Order No. 845, 163 FERC ¶ 61,043 at P 239).

⁵² Northwest & Intermountain IPPs Protest at 6; Joint Renewable Associations Protest at 4-9.

⁵³ Joint Renewable Associations Protest at 2; Oregon Windfarms Protest at 3; First Solar Protest at 2-3; Northwest & Intermountain IPPs Protest at 6-13.

participating in energy markets that require transmission pathways.⁵⁴ Northwest & Intermountain IPPs argue that the business practice is fundamentally inconsistent with the open access and regional transmission planning required under the Commission's foundational Order Nos. 888, 890, and 1000.⁵⁵

36. Oregon Windfarms states that Business Practice No. 73 violates the rights of qualifying facilities (QFs) under the Public Utility Regulatory Policies Act (PURPA), whose power must be delivered before non-QF resources, by allowing PacifiCorp to deny a QF interconnection request without studying the impact of curtailing non-QF resources.⁵⁶ Protesters contend that Business Practice No. 73 has a significant impact on the rates, terms, and conditions of PacifiCorp's LGIP, and should be filed with the Commission. Accordingly, they assert that PacifiCorp may not implement Business Practice No. 73 without Commission approval.⁵⁷ More generally, Western Power Trading Forum asserts that PacifiCorp and other transmission providers would benefit from Commission guidance regarding which study assumptions are acceptable and which are not, and requests that the Commission hold a technical conference.⁵⁸

c. Answers

37. In its answer, First Solar explains that, since the time its initial comments were developed, PacifiCorp held a queue reform meeting on July 11, 2019, where PacifiCorp outlined a 2019 stakeholder process to identify appropriate interconnection queue reforms. First Solar states that it anticipates that many of the concerns it raised in its initial comments might be addressed in this stakeholder process.⁵⁹

38. Similarly, PacifiCorp explains that it initiated a new stakeholder process to investigate potential queue reforms to present to the Commission in a separate filing.⁶⁰ PacifiCorp contends that Business Practice No. 73 is solely an explanatory document that provides transparency into the inevitable impact on interconnection study assumptions

⁵⁴ Northwest & Intermountain IPPs Protest at 10.

⁵⁵ *Id.* at 13-15.

⁵⁶ Oregon Windfarms Protest at 5-10.

⁵⁷ *Id.* at 3-5; Western Power Trading Forum Protest at 5-7.

⁵⁸ Western Power Trading Forum Protest at 8-9.

⁵⁹ First Solar Answer at 1-2.

⁶⁰ PacifiCorp Answer at 2-3.

and modeling of extreme system conditions outside of PacifiCorp's control.⁶¹ PacifiCorp asserts that many of the concerns raised by protesters are premature, untethered to Commission precedent, and beyond the scope of this present docket, and it requests that the Commission decline to take action on the comments so that its newly-established stakeholder process can continue.⁶²

d. Commission Determination

39. We find that PacifiCorp's proposed LGIP revisions regarding study models and assumptions comply with the requirements of Order Nos. 845 and 845-A because PacifiCorp adopts the *pro forma* LGIP provisions without modification.

40. With regard to the concerns raised by protesters, we find that PacifiCorp's Business Practice No. 73 is beyond the scope of this compliance proceeding. PacifiCorp has not proposed to include the business practice in its Tariff, and PacifiCorp's business practice is not a requirement of Order No. 845. In light of our finding that Business Practice No. 73 is beyond the scope of this compliance proceeding, we are making no findings in this order as to the merits of Business Practice No. 73.

6. Definition of Generating Facility

41. In Order No. 845, the Commission revised the definition of "Generating Facility" to include electric storage resources and to allow electric storage resources to interconnect pursuant to the Commission-jurisdictional large generator interconnection processes. Specifically, the Commission revised the definition of "Generating Facility" in the *pro forma* LGIP and *pro forma* LGIA as:

Generating Facility shall mean Interconnection Customer's device for the production *and/or storage for later injection* of electricity identified in the Interconnection Request, but shall not include the interconnection customer's Interconnection Facilities.⁶³

⁶¹ *Id.* at 3-6.

⁶² *Id.* at 7-13.

⁶³ Order No. 845, 163 FERC ¶ 61,043 at P 275 (additions italicized); *see also pro forma* LGIP § 1 (Definitions).

The Commission found that this definitional change will reduce a potential barrier to large electric storage resources with a generating facility capacity above 20 MW that wish to interconnect pursuant to the terms in the *pro forma* LGIP and *pro forma* LGIA.⁶⁴

a. PacifiCorp’s Compliance Filing

42. PacifiCorp proposes revisions to its LGIP and *pro forma* LGIA that amend Section 36 and Appendix 6 to Attachment N of its Tariff to incorporate the *pro forma* revisions adopted by Order Nos. 845 and 845-A without modification.⁶⁵

b. Commission Determination

43. We find that PacifiCorp’s revisions regarding the definition of a “Generating Facility” comply with the requirements of Order Nos. 845 and 845-A because PacifiCorp adopts the Commission’s *pro forma* LGIP and *pro forma* LGIA provisions without modification.

7. Interconnection Study Deadlines

44. In Order No. 845, the Commission modified the *pro forma* LGIP to add Sections 3.5.2 and 3.5.3, which require transmission providers to calculate and maintain on their OASIS sites or public websites summary statistics related to the timing of the transmission provider’s processing of interconnection studies and to update those statistics on a quarterly basis.⁶⁶ In these sections, the Commission included bracketed Tariff language to be completed by the transmission provider in accordance with the timelines established for the various studies in their LGIPs.⁶⁷ The Commission also revised the *pro forma* LGIP to add Section 3.5.4 to require transmission providers to file informational reports with the Commission if a transmission provider exceeds its interconnection study deadlines for more than 25 percent of any study type for two

⁶⁴ Order No. 845, 163 FERC ¶ 61,043 at P 275.

⁶⁵ Filing at 6; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.36, Definitions (2.0.0) (defining “Generating Facility”); Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 6, art. 1 (defining “Generating Facility”).

⁶⁶ Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP §§ 3.5.2 and 3.5.3.

⁶⁷ Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP §§ 3.5.2 and 3.5.3.

consecutive calendar quarters.⁶⁸ In adopting these reporting requirements, the Commission found that the reporting requirements strike a reasonable balance between providing increased transparency and information to interconnection customers and not unduly burdening transmission providers.⁶⁹ In Order No. 845-A, the Commission revised *pro forma* LGIP Section 3.5.3 to clarify that the data reporting and retention requirements begin in the first calendar quarter of 2020.⁷⁰

a. PacifiCorp Compliance Filing

45. PacifiCorp proposes revisions to incorporate in Section 38.5 of its LGIP the *pro forma* revisions adopted by Order Nos. 845 and 845-A without modification. Additionally, PacifiCorp proposes Tariff revisions that replace the bracketed placeholders in *pro forma* LGIP Sections 3.5.2.1, 3.5.2.2, and 3.5.2.3 with timelines that align with the timelines already in its Tariff to complete the feasibility, system impact, and facilities study, respectively. Further, in accordance with the *pro forma* LGIP, in Section 38.5.4(i) of its Tariff, PacifiCorp will also track information necessary to reflect “any allowance for Reasonable Efforts” from any such study timelines.⁷¹

46. PacifiCorp requests two limited variations from the *pro forma* revisions adopted by Order Nos. 845 and 845-A. PacifiCorp requests a deviation from *pro forma* LGIP Section 3.5.2, incorporated as Section 38.5.2 in PacifiCorp’s OATT, to change “Transmission Providers” to “Transmission Provider” in the following sentence: “For each calendar quarter, Transmission Providers must calculate and post the information detailed in Sections 38.5.2.1 through 38.5.2.4.” PacifiCorp asserts that this deviation is non-substantive, and is necessary to be consistent with the singular form of “Transmission Provider” used in this paragraph.⁷² Further, PacifiCorp requests a deviation from *pro forma* LGIP Sections 3.5.3 and 3.5.4(ii), (iii), incorporated in Sections 38.5.3 and 38.5.4 (ii), (iii) in PacifiCorp’s Tariff, to change the term “days” to “Calendar Days” with regard to PacifiCorp’s obligation to post certain metrics online and submit a report to the Commission if triggered. PacifiCorp asserts that this change is

⁶⁸ Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP § 3.5.4.

⁶⁹ Order No. 845, 163 FERC ¶ 61,043 at P 307.

⁷⁰ Order No. 845-A, 166 FERC ¶ 61,137 at P 107.

⁷¹ Filing at 6; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.5.

⁷² Filing at 6; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.5.2.

consistent with other references to “Calendar Days” in related sections of the LGIP, and will help ensure prompt postings and filings.⁷³

b. Commission Determination

47. We find that PacifiCorp’s proposed LGIP revisions that address PacifiCorp’s study deadline statistics and informational reporting requirements comply with the requirements of Order Nos. 845 and 845-A. PacifiCorp’s proposed Tariff revisions adopt the language provided in Order No. 845 and replace the bracketed placeholders in *pro forma* LGIP Sections 3.5.2.1, 3.5.2.2, and 3.5.2.3 with timelines that align with the timelines already in its Tariff. Additionally, we find that the minor variations proposed by PacifiCorp are consistent with or superior to Order Nos. 845 and 845-A because the proposed variations in the terms are consistent with those used throughout PacifiCorp’s LGIP and therefore add clarity.

8. Requesting Interconnection Service below Generating Facility Capacity

48. In Order No. 845, the Commission modified Sections 3.1, 6.3, 7.3, 8.2, and Appendix 1 of the *pro forma* LGIP to allow interconnection customers to request interconnection service that is lower than the proposed generating facility’s capacity,⁷⁴ recognizing the need for proper control technologies and flexibility for transmission providers to propose penalties to ensure that the generating facility does not inject energy above the requested level of service.⁷⁵

49. The Commission required, in revised *pro forma* LGIP Section 3.1, that transmission providers have a process in place to consider requests for interconnection service below the generating facility capacity. The Commission stipulated that such requests should be studied at the level of interconnection service requested for purposes of determining interconnection facilities, network upgrades, and associated costs, but that such requests may be subject to other studies at the full generating facility capacity to

⁷³ Filing at 6-7; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), §§ 38.5.3 and 38.5.4 (ii), (iii).

⁷⁴ The term generating facility capacity is defined as “the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.” *Pro forma* LGIA art. 1.

⁷⁵ Order No. 845, 163 FERC ¶ 61,043 at P 367; *see also pro forma* LGIP §§ 3.1, 6.3, 7.3 and 8.2, and *pro forma* LGIP app. 1.

ensure safety and reliability of the system.⁷⁶ In addition, revised *pro forma* LGIP Section 3.1 states that the interconnection customer is responsible for all study costs and interconnection facility and/or network upgrade costs required for safety and reliability. The Commission also required in revised *pro forma* LGIP Section 3.1 that any necessary control technologies and/or protection systems be memorialized in the LGIA.

50. The Commission required, in revised *pro forma* LGIP Sections 6.3, 7.3, and 8.2, that the feasibility, system impact, and facilities studies be performed at the level of interconnection service that the interconnection customer requests, unless the transmission provider is otherwise required to study the full generating facility capacity due to safety and reliability concerns. The Commission stated that, if the transmission provider determines that additional network upgrades are necessary based on these studies, it must specify which additional network upgrade costs are based on which studies and provide a detailed explanation of why the additional network upgrades are necessary.⁷⁷

51. Finally, the Commission revised Sections 4.4.1 and 4.4.2 of the *pro forma* LGIP to allow an interconnection customer to reduce the size of its interconnection request either prior to returning to the transmission provider an executed system impact study agreement or an executed facilities study agreement.⁷⁸

a. PacifiCorp's Compliance Filing

52. PacifiCorp proposes revisions to its LGIP that amend Sections 38.1, 39.4.1, 39.4.2, 41.3, 42.3, 43.2 of its Tariff and Attachment N, Appendix 1 to incorporate the *pro forma* LGIP provisions adopted by Order No. 845 without modification.⁷⁹ However,

⁷⁶ Order No. 845, 163 FERC ¶ 61,043 at PP 383-84.

⁷⁷ *Id.* P 384. The Commission clarified that, if the transmission provider determines, based on good utility practice and related engineering considerations and after accounting for the proposed control technology, that studies at the full generating facility capacity are necessary to ensure safety and reliability of the transmission system when an interconnection customer requests interconnection service that is lower than full generating facility capacity, then it must provide a detailed explanation for such a determination in writing to the interconnection customer. *Id.*

⁷⁸ *Id.* P 406; *see also pro forma* LGIP §§ 4.4.1 and 4.4.2.

⁷⁹ Filing at 7; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.1; *id.* pt. IV.41, Interconnection Feasibility Study (1.0.0), § 41.3; *id.* pt. 42, Interconnection System Impact Study (1.0.0),

PacifiCorp's proposed Tariff revisions to Section 38.1 of its LGIP do not fully incorporate the *pro forma* LGIP language adopted by Order No. 845.⁸⁰ Order No. 845 adopted the following language as the second sentence of the final paragraph in *pro forma* LGIP Section 3.1:

These requests for Interconnection Service shall be studied at the level of Interconnection Service requested for purposes of Interconnection Facilities, Network Upgrades, *and associated costs*, but may be subject to other studies at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by the Interconnection Customer.⁸¹

b. Commission Determination

53. We find that PacifiCorp's proposed LGIP revisions that allow an interconnection customer to request interconnection service below its full generating facility capacity partially comply with the requirements of Order Nos. 845 and 845-A. PacifiCorp adopts most of the *pro forma* LGIP language without modification. However, as discussed above, PacifiCorp's revisions to Section 38.1 of its LGIP omit some of the *pro forma* LGIP language required by Order No. 845.⁸² Accordingly, we direct PacifiCorp to file, within 60 days of the date of this order, a further compliance filing that incorporates the *pro forma* revisions to Section 38.1 of its LGIP, as required by Order No. 845.

9. Provisional Interconnection Service

54. In Order No. 845, the Commission required transmission providers to allow all interconnection customers to request provisional interconnection service.⁸³ The Commission explained that interconnection customers may seek provisional

§ 42.3; *id.* pt. IV.43, Interconnection Facilities Study (1.0.0), § 43.2; *id.* Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 1.

⁸⁰ See Order No. 845-A, 166 FERC ¶ 61,137 at P 117.

⁸¹ Order No. 845, 163 FERC ¶ 61,043 at P 347; *see also id.* P 367. The italics indicate language adopted by Order No. 845 that PacifiCorp's Tariff revisions failed to include. We recognize, however, that the *pro forma* LGIP that was available on the Commission's website failed to include that language.

⁸² *Id.* PP 347, 367, and app. B.

⁸³ Order No. 845, 163 FERC ¶ 61,043 at P 438.

interconnection service when available studies or additional studies, as necessary, indicate that there is a level of interconnection service that can occur to accommodate an interconnection request without the construction of any additional interconnection facilities and/or network upgrades, and the interconnection customer wishes to make use of that level of interconnection service while the facilities required for its full interconnection request are completed.⁸⁴ To implement this service, the Commission revised the *pro forma* LGIP and *pro forma* LGIA to add a definition for “Provisional Interconnection Service”⁸⁵ and for a “Provisional Large Generator Interconnection Agreement.”⁸⁶

55. In addition, the Commission added *pro forma* LGIA article 5.9.2, which details the terms for provisional interconnection service.⁸⁷ The Commission also explained that transmission providers have the discretion to determine the frequency for updating provisional interconnection studies to account for changes to the transmission system to reassess system capacity available for provisional interconnection service, and included bracketed tariff language to be completed by the transmission provider, to specify the frequency at which they perform such studies in their *pro forma* LGIA.⁸⁸ The Commission stated that interconnection customers are responsible for the costs for performing these provisional interconnection studies.⁸⁹

a. PacifiCorp’s Compliance Filing

56. PacifiCorp’s proposed Tariff revisions adopt the Commission’s *pro forma* definitions of “provisional interconnection service” and “provisional large generator interconnection agreement,” and the Commission’s *pro forma* language in LGIA article 5.9.2 without modification.⁹⁰ PacifiCorp also proposes language in article 5.9.2 to

⁸⁴ *Id.* P 441.

⁸⁵ *Pro forma* LGIP § 1 (Definitions); *pro forma* LGIP art. 1 (Definitions).

⁸⁶ *Pro forma* LGIP § 1 (Definitions); *pro forma* LGIP art. 1 (Definitions). The Commission declined, however, to adopt a separate *pro forma* provisional large generator interconnection agreement. Order No. 845, 163 FERC ¶ 61,043 at P 444.

⁸⁷ *Id.* P 438; *see also pro forma* LGIP § 5.9.2.

⁸⁸ Order No. 845, 163 FERC ¶ 61,043 at P 448.

⁸⁹ *Id.*

⁹⁰ Filing at 7; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.36, Definitions (2.0.0) (defining “Provisional Interconnection Service” and “Provisional Large Generator Interconnection Agreement”); *id.* Attachment N, app. to

state that it will update the maximum permissible output of a Provisional Interconnection Customer's Generating Facility "as system conditions warrant (in the determination of the Transmission Provider in its discretion) but no less frequently than annually." PacifiCorp states that maintaining a yearly updating schedule, while preserving the discretion to update more frequently if necessary, will balance the administrative burden on PacifiCorp with the Provisional Interconnection Customer's need for certainty and regular updates. PacifiCorp also explains that it is not proposing a template Provisional LGIA in its filing, but intends to work with requesting customers to develop and file such agreements on an *ad hoc* basis.⁹¹

b. Commission Determination

57. We find that PacifiCorp's proposed LGIP and *pro forma* LGIA revisions regarding provision interconnection service partially comply with the requirements of Order Nos. 845 and 845-A. PacifiCorp's proposed revisions comply with the Commission's requirements because PacifiCorp adopts the Commission's definitions of "provisional interconnection service" and "provisional large generator interconnection agreement," and, with one exception, the *pro forma* language in article 5.9.2 without modification. However, we find that PacifiCorp's proposed revisions to its *pro forma* LGIA article 5.9.2 do not comply with the requirements of Order Nos. 845 and 845-A because PacifiCorp's proposed language stating that PacifiCorp will update provisional interconnection studies "as system conditions warrant (in the determination of the Transmission Provider in its discretion) but no less frequently than annually"⁹² would create too much discretion for PacifiCorp regarding the frequency for updating provisional interconnection studies. Accordingly, we direct PacifiCorp to file, within 60 days of the date of this order, a further compliance filing with revisions that either clarify, in *pro forma* LGIA article 5.9.2, that PacifiCorp will not update its provisional interconnection service studies more frequently than annually unless a relevant change to the system occurs⁹³ or remove the language in PacifiCorp's *pro forma* LGIA article 5.9.2

Large Generator Interconnection Procedures (8.1.0), app. 6, art. 1 (defining "Provisional Interconnection Service" and "Provisional Large Generator Interconnection Agreement"); *id.* Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 6, art. 5.9.2.

⁹¹ Filing at 7-8.

⁹² PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 6, art. 5.9.2.

⁹³ *See, e.g., Black Hills Colo. Elec., LLC*, 169 FERC ¶ 61,144, at P 41 (2019) (directing Black Hills to submit revisions stating that its periodic updates to provisional

that gives PacifiCorp discretion to decide whether it will update provisional interconnection service studies more often than on an annual basis.

10. Surplus Interconnection Service

58. In Order No. 845, the Commission adopted *pro forma* LGIP Sections 1, 3.3, and 3.3.1 and *pro forma* LGIA article 1 to establish surplus interconnection service, which the Commission defined as any unneeded portion of interconnection service established in an LGIA such that if the surplus interconnection service is utilized the total amount of interconnection service at the point of interconnection would remain the same.⁹⁴ Surplus interconnection service enables a new interconnection customer to utilize the unused portion of an existing interconnection customer's interconnection service within specific parameters.⁹⁵ The Commission required transmission providers to revise their tariffs to include the new definition of surplus interconnection service in their *pro forma* LGIP and *pro forma* LGIA, and provide in the *pro forma* LGIP an expedited interconnection process outside of the interconnection queue for surplus interconnection service.⁹⁶ That expedited process must allow affiliates of the existing interconnection customer to use surplus interconnection service for another interconnecting generating facility and allow for the transfer of surplus interconnection service that the existing interconnection customer or one of its affiliates does not intend to use.⁹⁷ The transmission provider must perform reactive power, short circuit/fault duty, and stability analyses studies as well as steady-state (thermal/voltage) analyses as necessary to ensure evaluation of all required reliability conditions to provide surplus interconnection service and ensure the reliable use of surplus interconnection service.⁹⁸ The original interconnection customer must be able to stipulate the amount of surplus interconnection service that is available, designate when that service is available, and describe any other conditions under which surplus

interconnection studies will not be necessary if no changes to the system occurred during the period).

⁹⁴ Order No. 845, 163 FERC ¶ 61,043 at P 467; *see also pro forma* LGIP § 1 (Definitions); *pro forma* LGIP art. 1 (Definitions).

⁹⁵ Order No. 845, 163 FERC ¶ 61,043 at P 467; Order No. 845-A, 166 FERC ¶ 61,137 at P 119.

⁹⁶ Order No. 845, 163 FERC ¶ 61,043 at P 467; *see also pro forma* LGIP §§ 3.3 and 3.3.1.

⁹⁷ Order No. 845, 163 FERC ¶ 61,043 at P 483; *see also pro forma* LGIP § 3.3.

⁹⁸ Order No. 845, 163 FERC ¶ 61,043 at PP 455, 467.

interconnection service at the point of interconnection may be used.⁹⁹ When the original interconnection customer, the surplus interconnection service customer, and the transmission provider enter into agreements for surplus interconnection service, they must be filed by the transmission provider with the Commission, because any surplus interconnection service agreement will be an agreement under the transmission provider's open access transmission tariff.¹⁰⁰

a. PacifiCorp's Compliance Filing

59. PacifiCorp proposes revisions to its LGIP and *pro forma* LGIA that adopt the Commission's *pro forma* LGIP and *pro forma* LGIA revisions for surplus interconnection service as required by Order Nos. 845 and 845-A without modification.¹⁰¹

60. PacifiCorp also proposes revisions to its LGIP in Section 38 of its Tariff and to its LGIP Interconnection Request and System Impact Study Agreement Template in Attachment N Appendices 1 and 3, respectively.¹⁰² Specifically, in Section 38.3.1, PacifiCorp provides that an interconnection customer must submit a study request and provide a study deposit of \$10,000. Once the request is complete and the deposit is received, PacifiCorp and the interconnection customer will arrange a scoping meeting within five business days.¹⁰³ Within five business days after this scoping meeting, the interconnection customer must notify PacifiCorp in writing that it wants to proceed, and PacifiCorp will tender a draft study agreement to the transmission customer within five

⁹⁹ *Id.* P 481.

¹⁰⁰ *Id.* P 499.

¹⁰¹ Filing at 8; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.36, Definitions (2.0.0) (defining “Surplus Interconnection Service”); *id.* pt. IV.38, Interconnection Requests (1.1.0), § 38.3; *id.* Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 6, art. 1 (defining “Surplus Interconnection Service”).

¹⁰² Deficiency Response at 2; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.3.

¹⁰³ Deficiency Response at 3; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.3.1.

business days, which the transmission customer must execute and return within 30 calendar days.¹⁰⁴

61. PacifiCorp states that it will evaluate the original interconnection customer's system impact study to determine if it is sufficient to resolve the surplus request, and if not, it shall use reasonable efforts to conduct a system impact study within 90 calendar days. This system impact study will include, as necessary, reactive power, short circuit/fault duty, stability analyses, steady state (thermal/voltage), off-peak conditions if not studied previously, and any other appropriate studies.¹⁰⁵ PacifiCorp proposed revisions provide that within 30 calendar days following the report's issuance, unless otherwise mutually agreed, the parties will meet to discuss the results of the interconnection system impact study. Further, within 30 calendar days following the report, PacifiCorp will tender to the original interconnection customer that is making surplus service available an amended and restated LGIA that reflects the new surplus service, and to both the original and the surplus interconnection customers a draft surplus interconnection service agreement.¹⁰⁶

62. PacifiCorp explains that the surplus interconnection service agreement will be deemed withdrawn if, within 60 calendar days of tender of the draft surplus interconnection service agreement and unless otherwise agreed by the parties: (1) the original interconnection customer fails to also execute the draft amended and restated LGIA following its execution of the surplus interconnection service agreement; or (2) either the original interconnection customer or the surplus interconnection customer has not: (a) executed the surplus interconnection service agreement; (b) requested filing of an unexecuted surplus interconnection service agreement; or (c) initiated dispute resolution procedures. PacifiCorp asserts that this is consistent with the requirement that this be an expedited process, and that both customers must memorialize their respective contractual commitments.¹⁰⁷ PacifiCorp states that it will submit the surplus interconnection agreement for filing with the Commission within fifteen business days

¹⁰⁴ Deficiency Response at 3; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), §§ 38.3.2.1 and 38.3.2.2.

¹⁰⁵ Deficiency Response at 3; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), §§ 38.3.3 and 38.3.2.4.

¹⁰⁶ Deficiency Response at 3-4; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.3.3.

¹⁰⁷ Deficiency Response at 4; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.3.2.

after receiving either a fully executed agreement or a request to file an unexecuted agreement.¹⁰⁸

63. PacifiCorp also proposes revisions to its LGIP Interconnection Request and System Impact Study Agreement Template in Attachment N, Appendices 1 and 3 of its Tariff, to enable the new surplus interconnection service-related provisions in Section 38 and to leverage its existing LGIP templates.¹⁰⁹ Among other things, these revisions set forth the supplemental information customers must provide to support a request for surplus interconnection service. This required additional information includes an explanation of the availability and plans for the surplus, why the surplus capacity is not being used by the original interconnection customer, confirmation by the original interconnection customer that neither it nor its affiliates seek the surplus service, when the surplus is available for use, and any conditions under which the surplus may be used.¹¹⁰

b. Commission Determination

64. We find that PacifiCorp's proposed LGIP and *pro forma* LGIA revisions regarding surplus interconnection service comply with the requirements of Order Nos. 845 and 845-A. PacifiCorp adopts the *pro forma* LGIP and *pro forma* LGIA revisions for surplus interconnection service as required by Order Nos. 845 and 845-A without modification. We also find that PacifiCorp's proposed surplus interconnection service process meets the requirements of Order Nos. 845 and 845-A because PacifiCorp will evaluate surplus interconnection service requests outside of its non-surplus interconnection queue. Additionally, as required by Order Nos. 845 and 845-A, PacifiCorp's process requires that the transmission provider, original interconnection customer, and surplus interconnection service customer file a surplus interconnection service agreement with the Commission that includes the terms and conditions of surplus interconnection service.

¹⁰⁸ Deficiency Response at 4; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.38, Interconnection Requests (1.1.0), § 38.3.3.

¹⁰⁹ Deficiency Response at 4-6; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 1, 3.

¹¹⁰ *See* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 1, Attachment B.

11. Material Modifications and Incorporation of Advanced Technologies

65. In Order No. 845, the Commission modified Section 4.4.2(c) of the *pro forma* LGIP to allow an interconnection customer to incorporate certain technological advancements to its interconnection request, prior to the execution of the interconnection facilities study agreement,¹¹¹ without risking the loss of its queue position. The Commission required transmission providers to develop and include in their LGIPs a definition of permissible technological advancements that will create a category of technological changes that, by definition, do not constitute a material modification and, therefore, will not result in the loss of queue position.¹¹² In addition, the Commission modified Section 4.4.6 of the *pro forma* LGIP to require transmission providers to insert a technological change procedure that includes the requisite information and process that the transmission provider will follow to assess whether an interconnection customer's proposed technological advancement is a material modification.¹¹³

66. The Commission required that the technological change procedure specify what technological advancements can be incorporated at various stages of the interconnection process and clearly identify which requirements apply to the interconnection customer and which apply to the transmission provider.¹¹⁴ Additionally, the technological change procedure must state that, if the interconnection customer seeks to incorporate technological advancements into its proposed generating facility, it should submit a technological advancement request, and the procedure must specify the information that the interconnection customer must submit as part of that request.¹¹⁵

67. The Commission also required that the technological change procedure specify the conditions under which a study will or will not be necessary to determine whether a

¹¹¹ While the Commission clarified that interconnection customers may submit a technological advancement request up until execution of the facilities study agreement, the Commission stated that it will permit transmission providers to propose rules limiting the submission of technological advancement requests to a single point in the study process (prior to the execution of a facilities study agreement), to the extent the transmission provider believes it appropriate. Order No. 845, 163 FERC ¶ 61,043 at P 536.

¹¹² *Id.* P 518.

¹¹³ *Id.*; see also *pro forma* LGIP § 4.4.6.

¹¹⁴ Order No. 845, 163 FERC ¶ 61,043 at P 519.

¹¹⁵ *Id.*

proposed technological advancement is a material modification.¹¹⁶ The Commission explained that the technological change procedure must also state that, if a study is necessary to evaluate whether a particular technological advancement is a material modification, the transmission provider shall clearly indicate to the interconnection customer the types of information and/or study inputs that the interconnection customer must provide to the transmission provider, including, for example, study scenarios, modeling data, and any other assumptions.¹¹⁷ In addition, the Commission required that the technological change procedure explain how the transmission provider will evaluate the technological advancement request to determine whether it is a material modification.¹¹⁸

68. Further, the Commission required that the technological change procedure outline a time frame of no more than 30 days after the interconnection customer submits a formal technological advancement request for the transmission provider to perform and complete any necessary additional studies.¹¹⁹ The Commission also found that, if the transmission provider determines that additional studies are necessary to evaluate whether a technological advancement is a material modification, the interconnection customer must tender a deposit, and the transmission provider must specify the amount of the deposit in the transmission provider's technological change procedure.¹²⁰ In addition, the Commission explained that, if the transmission provider cannot accommodate a proposed technological advancement without triggering the material modification provision of the *pro forma* LGIP, the transmission provider must provide an explanation to the interconnection customer regarding why the technological advancement is a material modification.¹²¹

69. In Order No. 845-A, the Commission clarified that: (1) when studies are necessary, the interconnection customer's technological change request must demonstrate that the proposed incorporation of the technological change will result in electrical performance that is equal to or better than the electrical performance expected prior to the

¹¹⁶ *Id.*; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

¹¹⁷ Order No. 845, 163 FERC ¶ 61,043 at P 521.

¹¹⁸ *Id.*

¹¹⁹ *Id.* P 535.

¹²⁰ *Id.* P 534. The Commission set the default deposit amount to \$10,000, but stated that a transmission provider may propose a reasonable alternative deposit amount in its compliance filing and include a justification supporting this alternative amount. *Id.*

¹²¹ *Id.* P 522.

technological change and will not cause any reliability concerns; (2) if the interconnection customer cannot demonstrate in its technological change request that the proposed technological change would result in equal or better electrical performance, the change will be assessed pursuant to the existing material modification provisions in the *pro forma* LGIP; (3) information regarding electrical performance submitted by the interconnection customer is an input into the technological change study, and this factor alone is not determinative of whether a proposed technological change is a material modification; and (4) the determination of whether a proposed technological change (that the transmission provider does not otherwise include in its definition of permissible technological advancements) is a material modification should include an analysis of whether the proposed technological change materially impacts the timing and costs of lower-queued interconnection customers.¹²²

a. PacifiCorp's Compliance Filing

70. PacifiCorp proposes to adopt a definition of permissible technological advancement and the associated technological change procedure in its LGIP through revisions to Tariff Sections 36 and 39.4.6, respectively.¹²³ PacifiCorp also proposes to adopt additional defined terms in Section 36 of its Tariff,¹²⁴ and to include a technological advancement study agreement form as new Appendix 8 to its LGIP.¹²⁵

71. PacifiCorp proposes the following definition of permissible technological advancement:

Permissible Technological Advancement shall mean a technological advancement requested by the Interconnection Customer to the components of the Large Generating Facility described in the Interconnection Customer's Interconnection Request that (a) would result in electrical performance that is

¹²² Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

¹²³ Filing at 8; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.36, Definitions (2.0.0) (defining “permissible technological advancement”); *id.* pt. IV.39, Queue Position (1.0.0), § 39.4.6.

¹²⁴ *See* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.36, Definitions (2.0.0) (defining “Technological Advancement Request,” “Technological Advancement Study,” and “Technological Advancement Study Agreement”).

¹²⁵ *See* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, Attachment N, app. to Large Generator Interconnection Procedures (8.1.0), app. 8.

equal to or better than the electrical performance expected prior to the change; (b) would not increase the interconnection customer's requested interconnection service, and (c) would not cause any reliability concerns (i.e., material impacts to the transmission system, including impacts to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response).

Technological advancements that do not degrade the electrical characteristics of the generating equipment (e.g., the ratings, impedances, efficiencies, capabilities, and performance of the equipment under steady state and dynamic conditions) qualify as having performance that is equal to or better than the performance expected prior to the change.

Proposed technological advancements that generally can be considered Permissible Technological Advancements without extensive or additional studies include, without limitation, advancements to turbines, inverters, plant supervisory equipment or other proposed modifications that may affect a Large Generating Facility's ability to provide ancillary services. Proposed technological advancements that entail changes to the generation technology or fuel type (for example, and without limitation, a change from wind to solar generation technology) are not Permissible Technological Advancements.¹²⁶

PacifiCorp maintains that this proposed definition satisfies the Commission's requirement that transmission providers identify a category of technological advancements that will not constitute a material modification and do not result in a loss of queue position.¹²⁷

72. PacifiCorp also proposes to add to its LGIP new defined terms for "technological advancement request," "technological advancement study," and "technological advancement study agreement." PacifiCorp asserts that these new definitions and associated new form of agreement are consistent with, or superior to, the reforms in Order Nos. 845 and 845-A because they provide additional guidance regarding PacifiCorp's analysis and modeling procedures for incorporating new technological

¹²⁶ *Id.* pt. IV.36, Definitions (2.0.0) (defining "permissible technological advancement").

¹²⁷ Filing at 9.

changes in existing interconnection requests, thereby enhancing the efficiency of the interconnection process.¹²⁸

73. PacifiCorp states that its proposed technological change procedure is subdivided into five subsections. Section 39.4.6.1 of PacifiCorp's Tariff addresses an interconnection customer's technological advancement request. A technological advancement request may be submitted any time after the submission of an interconnection request, but before the execution of an interconnection facility study agreement by the interconnection customer. The request must be submitted along with all information necessary to support PacifiCorp's analysis of whether the proposed technological advancement constitutes a permissible technological advancement. PacifiCorp states that the request will not be deemed complete or subject to further review until the interconnection customer provides required information, such as study scenarios, modeling data, and other assumptions, and that PacifiCorp would pause any ongoing interconnection work for the customer while it analyzes the completed technological advancement request. If the request is submitted during the time allocated under the LGIP for the interconnection customer to execute and return a study agreement to PacifiCorp, the deadline for execution and return of the study agreement will be suspended while PacifiCorp analyzes the request.¹²⁹

74. Under proposed Section 39.4.6.2 of PacifiCorp's Tariff, once the technological advancement request is complete, PacifiCorp will perform an initial analysis to determine whether the requested change falls into one of three categories: (1) a permissible technological advancement without need for additional study, in which case the advancement will be incorporated into the interconnection request; (2) a non-permissible technological advancement, which would be considered under a material modification analysis; or (3) a potential permissible technological advancement for which additional study is required.¹³⁰ If additional study is needed, PacifiCorp would require the interconnection customer to execute a technological advancement study agreement, which is provided as new proposed Appendix 8 to PacifiCorp's Tariff, Attachment N.¹³¹

¹²⁸ *Id.* at 10.

¹²⁹ *Id.* at 10-11; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.39, Queue Position (1.0.0), § 39.4.6.1.

¹³⁰ Filing at 11; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.39, Queue Position (1.0.0), § 39.4.6.2.

¹³¹ Filing at 11; *see* PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.39, Queue Position (1.0.0), § 39.4.6.3.

75. The Technological Advancement Study shall seek to determine: (i) whether the proposed technological advancement is a Permissible Technological Advancement, by focusing on whether the proposed technological advancement will result in equal or better electrical performance than the Large Generating Facility described in the Interconnection Request, and whether the proposed technological advancement will cause any reliability concerns (i.e., material impacts to the transmission system, including impacts to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response); and (ii) if the proposed technological advancement is determined not to be a Permissible Technological Advancement, whether the proposed technological advancement is a Material Modification.¹³²

76. Section 39.4.6.4 of PacifiCorp's Tariff provides that, once PacifiCorp receives an executed technological advancement study agreement, a \$10,000 deposit, and all requested technical data and information, PacifiCorp will complete the study within 30 calendar days.¹³³ PacifiCorp's revised Tariff provides that if PacifiCorp determines that it requires additional technical information to complete the technological advancement study, it will notify the interconnection customer of the additional information required. The interconnection customer shall have 10 business days to provide the additional technical information or PacifiCorp will finalize the technological advancement study with results that indicate that the interconnection customer has not demonstrated that its proposed technological advancement is a permissible technological advancement. Upon completion of the study, PacifiCorp will provide the interconnection customer notice of its study conclusions and will provide supporting documentation upon request. If the study results demonstrate that the proposed technological advancement is a permissible technological advancement, it will be incorporated into the interconnection request. However, if the results indicate that it would be both a non-permissible technological advancement and material modification, then PacifiCorp will provide an explanation for this conclusion, and the interconnection customer must withdraw the proposed advancement or proceed as a new interconnection request.¹³⁴

77. Finally, Section 39.4.6.5 of PacifiCorp's Tariff provides that the transmission provider and interconnection customer will modify any existing interconnection agreements as necessary to incorporate the approved permissible technological advancement or any relevant study results. The Tariff states that PacifiCorp may require

¹³² See PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.39, Queue Position (1.0.0), § 39.4.6.4.

¹³³ See PacifiCorp, PacifiCorp – Transmission OATT and Service Agmts, pt. IV.39, Queue Position (1.0.0), § 39.4.6.4.

¹³⁴ *Id.*

additional time or information to complete or re-run studies that were suspended during the pendency of the technological advancement request.¹³⁵

b. Commission Determination

78. We find that PacifiCorp's proposed LGIP revisions to incorporate a definition of a permissible technological advancement and a technological change procedure partially comply with the requirements of Order Nos. 845 and 845-A. Specifically, we find that PacifiCorp's proposed definition of a permissible technological advancement meets the Commission's requirement to provide a category of technological change that does not constitute a material modification. Additionally, we find that PacifiCorp's additional defined terms and the technological advancement study agreement form are compliant with the requirements of Order Nos. 845 and 845-A, and are just and reasonable because they provide additional clarity to PacifiCorp's technological change procedure.

79. With regard to the deadline for completion of a technological advancement request, Order No. 845 provides that the determination of whether a change is a material modification must be made within 30 days of the initial request.¹³⁶ However, PacifiCorp's proposed revisions to Section 39.4.6.4 of its Tariff provide that the study will be completed within 30 days of receipt of the executed technological advancement study agreement, the deposit, and all necessary technical data and information. Accordingly, we direct PacifiCorp to file, within 60 days of the date of this order, a further compliance filing that revises its proposed technological change procedure to provide that PacifiCorp will determine whether or not a technological advancement is a material modification within 30 calendar days of receipt of the initial request.

80. Further, we note that Section 39.4.6.5 of PacifiCorp's Tariff allows it to, after the completion of the technological change procedure but evidently before amending any existing interconnection study agreements, require additional time or information to complete or re-run studies that were suspended during the pendency of the technological advancement request. We accept PacifiCorp's proposed provisions. However, we reiterate that the purpose of the technological change procedure is to determine whether a proposed change is a material modification within 30 days of receipt of the initial request.¹³⁷ Although PacifiCorp may need additional time to obtain information before amending any existing interconnection study agreements, our understanding is that PacifiCorp does not intend to use this information to change any underlying

¹³⁵ See *id.* pt. IV.39, Queue Position (1.0.0), § 39.4.6.5.

¹³⁶ Order No. 845, 163 FERC ¶ 61,043 at P 535; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

¹³⁷ Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

determination that a requested technological change is a permissible technological advancement or is not a material modification. We note that nothing in Order Nos. 845 and 845-A allows the transmission provider to reverse such a determination upon further study.

12. Other Issues Raised by PacifiCorp

a. Updating of Internal References and Other Changes

81. PacifiCorp proposes revisions to its Tariff to update Tariff numbering and internal references to reflect the changes made in compliance with Order Nos. 845 and 845-A. PacifiCorp also proposes to update the table of contents in its LGIP and *pro forma* LGIA, to correct mistaken “Attachment A” references in LGIA Articles 4.1.1.1 and 4.1.2.1 to “Appendix A,” and to revise LGIA article 5.1.4 to change “Interconnection Customers” to the singular “Interconnection Customer,” which PacifiCorp states is identical to the Commission’s required language from Order No. 845.¹³⁸ PacifiCorp asserts that these changes are consistent with or superior to the *pro forma* LGIP and *pro forma* LGIA in that they are ministerial, non-substantive revisions that will bring additional clarity and precision to PacifiCorp’s LGIP and *pro forma* LGIA.¹³⁹

b. Commission Determination

82. We find that the additional revisions proposed by PacifiCorp are consistent with or superior to Order Nos. 845 and 845-A because they will bring additional clarity and precision to PacifiCorp’s LGIP and *pro forma* LGIA.

¹³⁸ Filing at 12; Deficiency Response at 6.

¹³⁹ Deficiency Response at 6.

The Commission orders:

(A) PacifiCorp's compliance filing is hereby accepted, effective May 22, 2019, subject to a further compliance filing, as discussed in the body of this order.

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

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.