170 FERC ¶ 61,043
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Tucson Electric Power Company Docket No. ER19-1934-002

ORDER ON COMPLIANCE

(Issued January 23, 2020)

1. On May 22, 2019, as amended July 12, 2019, Tucson Electric Power Company (Tucson) 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 Tucson's filing partially complies with the requirements of Order Nos. 845 and 845-A. Accordingly, we accept Tucson's compliance filing, effective May 22, 2019, and direct Tucson to submit a further compliance filing within sixty (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 interconnection requests and fewer interconnection requests failing to reach commercial

[1] *Reform of Generator Interconnection Procedures and Agreements,* Order No. 845, 163 FERC ¶ 61,043 (2018), *errata notic*e, 167 FERC ¶ 61,123 *order on reh'g*, Order No. 845-A, 166 FERC ¶ 61,137, *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.

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 facilities[4] and stand alone network upgrades[5] 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] Order No. 845, 163 FERC ¶ 61,043 at 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 service[10] 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. Tucson's Compliance Filing

6. Tucson states that its revised LGIP and revised *pro forma* LGIA are contained in Attachment I-3 of its Tariff. Tucson states that its proposed revisions adopt the *pro forma* language from Order Nos. 845 and 845-A, without revision. In instances where the Commission afforded transmission providers discretion, Tucson proposes language for certain sections in its LGIP and *pro forma* LGIA in response. Specifically, Tucson proposes revisions for the following sections: (1) LGIP section 1—Definitions; (2) LGIP section 3.8—Identification of Contingent Facilities; (3) LGIP section

[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.

4.4.6—Technological Change Procedure; and (4) LGIA section 5.9.2—Provisional Interconnection Service.[12]

7. Tucson requests an effective date of May 22, 2019 for its proposed Tariff revisions.

III. Notice and Responsive Pleadings

8. Notice of Tucson'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. None was filed.

9. On June 13, 2019, Commission staff issued a deficiency letter requesting additional information regarding Tucson's procedure for allowing surplus interconnection service. On July 12, 2019, Tucson filed an amendment to its filing in response to the deficiency letter. Notice of Tucson's amendment was published in the *Federal Register*, 84 Fed. Reg. 34,882 (2019), with interventions and protests due on or before August 2, 2019. None was filed.

IV. Discussion

A. Substantive Matters

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

1. Proposed Variations

11. As discussed further below, Tucson 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

[12] Tucson May 22, 2019 Compliance Filing at 2 (Filing).

[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,

"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* LGIA or LGIP based on regional reliability requirements and required transmission 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 Tucson's proposed variations from the requirements of Order Nos. 845 and 845-A accordingly.

2. Interconnection Customer's Option to Build

12. 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]

13. 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

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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).

[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.

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 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. Tucson's Compliance Filing

14. Tucson proposes revisions to its *pro forma* LGIA to amend articles 5.1, 5.1.3, 5.1.4, and 5.2 to incorporate the *pro forma* LGIA revisions adopted by Order Nos. 845 and 845-A without modification.[24] Additionally, Tucson proposes revisions to revise the definition of stand alone network upgrade in its LGIP and *pro forma* LGIA to incorporate the revisions to the definition adopted by Order Nos. 845 and 845-A without modification.[25]

b. Commission Determination

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

3. Dispute Resolution

16. 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

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

[21] *Id.* P 61.

[22] *Id.* PP 75.

[23] *Id.* P 33.

[24] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIA arts. 1 (Definitions), 5.1 (Options), 5.1.3 (Option to Build), 5.1.4 (Negotiated Option), 5.2(12), and LGIP § 1 (Definitions).

[25] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIA art. 1 (Definitions) and LGIP § 1 (Definitions).

that allow a disputing party to unilaterally seek non-binding dispute resolution.[26] 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.[27]

a. Tucson's Compliance Filing

17. Tucson proposes revisions to its LGIP that adopt the language required by Order Nos. 845 and 845-A, without modification.[28]

b. Commission Determination

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

4. Identification and Definition of Contingent Facilities

19. 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.[29] 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

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

[27] Order No. 845, 163 FERC ¶ 61,043 at P 139.

[28] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP § 13.5.5 (Non-Binding Dispute Resolution Procedures).

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

include in the interconnection customer's generator interconnection agreement.[30] 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.[31] The Commission stated that this transparency will ensure that the method is applied on a non-discriminatory basis.[32] 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 with each identified contingent facility when this information is readily available and not commercially sensitive.[33]

a. Tucson's Compliance Filing

20. Tucson adopts the Commission's *pro forma* LGIP definition of contingent facilities. Tucson also proposes revisions to its LGIP to add new section 3.8 containing the *pro forma* introductory paragraph and a method for identifying contingent facilities.[34] Tucson's proposed section 3.8 states that Tucson will identify contingent facilities by reviewing and accounting for the following: (1) planned network upgrades associated with interconnection customers with higher queue priority; and/or (2) coordination with applicable affected systems to determine what contingent facilities have been identified through affected system studies; and/or (3) other planned transmission projects unrelated to any interconnection requests. Further, section 3.8 states that any such planned upgrades will be identified and listed in the system impact study if such projects, 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. Additionally, Tucson will provide a written explanation of why a facility was identified as a contingent facility and how it relates to the interconnection request.[35]

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[30] Order No. 845, 163 FERC ¶ 61,043 at P 199.

[31] *Id.*; *see also pro forma* LGIP § 3.8.

[32] Order No. 845, 163 FERC ¶ 61,043 at P 200.

[33] *Id.* P 199; *see also pro forma* LGIP § 3.8.

[34] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP § 3.8 (Identification of Contingent Facilities).

[35] Tucson OATT, attach. I-3 (8.0.1), LGIP § 3.8 (Identification of Contingent Facilities).

b. Commission Determination

21. We find that the revised provisions that identify and describe Tucson's method for determining contingent facilities, as Tucson proposes in its LGIP, partially comply with the requirements of Order Nos. 845 and 845-A. We find that Tucson complies with the requirements of Order Nos. 845 and 845-A because Tucson 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, Tucson'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.

22. However, as specified in Order No. 845, transmission providers must include, in section 3.8 of their LGIPs, a method for determining contingent facilities.[36] 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.[37] 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.[38] Tucson'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 Tucson will use as part of its method to identify contingent facilities.[39] Without this information, an interconnection customer will not understand how Tucson will evaluate potential contingent facilities to determine their relationship to an individual interconnection request.[40] Further, including provisions regarding specific thresholds or criteria in Tucson's LGIP will ensure Tucson's technical screens or analyses will be applied to interconnection requests on a consistent, not unduly discriminatory or preferential basis. Accordingly, we direct Tucson to file, within

[36] Order No. 845, 163 FERC ¶ 61,043 at P 199.

[37] *Id.* P 200.

[38] *Id.*

[39] 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.

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

sixty (60) days of the date of this order, a further compliance filing that includes in section 3.8 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 Tucson include in section 3.8 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.

5. Transparency Regarding Study Models and Assumptions

23. 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. 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 and be representative of current system conditions." 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).[41]

24. 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.[42] 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.[43] 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.[44]

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[41] Order No. 845, 163 FERC ¶ 61,043 at P 236; *see also pro forma* LGIP § 2.3.

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

[43] *Id.* P 85 (citing 18 C.F.R. § 388.113(g)(5)(i)).

[44] *Id.* P 88.

a. Tucson's Compliance Filing

25. Tucson proposes revisions to section 2.3 of its LGIP that incorporate the language adopted by Order Nos. 845 and 845-A without modification.[45]

b. Commission Determination

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

6. Definition of Generating Facility

27. 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.[46]

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.[47]

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[45] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP § 2.3 (Base Case Data).

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

[47] Order No. 845, 163 FERC ¶ 61,043 at P 275.

a. Tucson's Compliance Filing

28. Tucson proposes revisions to section 1 of its LGIP and its *pro forma* LGIA to incorporate the language adopted by Order Nos. 845 and 845-A without modification.[48]

b. Commission Determination

29. We find that Tucson's revisions regarding the definition of a "Generating Facility" comply with the requirements of Order Nos. 845 and 845-A because Tucson adopts the Commission's *pro forma* LGIP and *pro forma* LGIA provisions without modification.

7. Interconnection Study Deadlines

30. 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. 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.[49] 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 consecutive calendar quarters.[50] 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.[51] 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.[52]

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[48] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP § 1 (Definitions) and LGIA art. 1 (Definitions).

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

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

[51] Order No. 845, 163 FERC ¶ 61,043 at P 307.

[52] Order No. 845-A, 166 FERC ¶ 61,137 at P 107.

a. Tucson's Compliance Filing

31. Tucson proposed revisions to its LGIP to add a new section 3.5.2 that incorporates the *pro forma* language of Order Nos. 845 and 845-A without modification.[53] Additionally, Tucson 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 existing timelines reflected in its Tariff for completing feasibility, system impact, and facilities studies, respectively.[54]

b. Commission Determination

32. We find that the revised provisions that address Tucson's study deadline statistics and informational reporting requirements, as proposed in Tucson's LGIP, comply with the requirements of Order Nos. 845 and 845-A because Tucson proposes to include *pro forma* LGIP sections 3.5.2, 3.5.3, and 3.5.4 without modification, except to replace the bracketed placeholders with timelines that align with the timelines already in its Tariff.

8. Requesting Interconnection Service below Generating Facility Capacity

33. 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,[55] 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.[56]

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[53] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP §§ 3.5.2 (Requirement to Post Interconnection Study Metric), 3.5.3, and 3.5.4.

[54] Tucson OATT, attach. I-3 (8.0.1), LGIP §§ 3.5.2.1 (Interconnection Feasibility Studies Processing Time), 3.5.2.2 (Interconnection System Impact Studies Processing Time), and 3.5.2.3 (Interconnection Facilities Studies Processing Time).

[55] 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.

[56] 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.

34. 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 ensure safety and reliability of the system.[57] 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, as well as any potential penalties for exceeding the requested level of interconnection service, be memorialized in the LGIA.

35. 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.[58]

36. 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.[59]

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[57] Order No. 845, 163 FERC ¶ 61,043 at PP 383-384.

[58] *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.*

[59] *Id.* P 406; *see also pro forma* LGIP §§ 4.4.1 and 4.4.2.

a. Tucson's Compliance Filing

37. Tucson proposes revisions to its LGIP that adopt the Commission's proposed reforms to the *pro forma* LGIP sections 3.1, 4.4.1, 4.4.2, 6.3, 7.3, and 8.2 and Appendix 1 to incorporate the language set forth in Order Nos. 845 and 845-A without modification.[60] However, Tucson's proposed Tariff revisions do not fully incorporate the *pro forma* LGIP language adopted by Order No. 845.[61] 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.[62]

b. Commission Determination

38. We find that Tucson'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 because they incorporate most of the *pro forma* LGIP language without modification. However, as discussed above, Tucson's revisions to section 3.1 of its LGIP omit some of the *pro forma* LGIP language required by Order No. 845.[63] Accordingly, we direct Tucson to file, within sixty (60) days of the date of this order, a further compliance filing that

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[60] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP §§ 3.1 (General), 4.4.1, 4.4.2 (Modifications), 6.3 (Interconnection Feasibility Study Procedures), 7.3 (Scope of Interconnection System Impact Study), 8.2 (Scope of Interconnection Facilities Study), and app. 1 (Interconnection Request for a Large Generating Facility).

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

[62] 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 Tucson'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.

[63] *Id.* PP 347, 367, and app. B.

incorporates the *pro forma* revisions to section 3.1 of its LGIP, as required by Order No. 845.

9. Provisional Interconnection Service

39. In Order No. 845, the Commission required transmission providers to allow all interconnection customers to request provisional interconnection service.[64] The Commission explained that interconnection customers may seek provisional 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.[65] To implement this service, the Commission revised the *pro forma* LGIP and *pro forma* LGIA to add a definition for "Provisional Interconnection Service"[66] and for a "Provisional Large Generator Interconnection Agreement."[67]

40. In addition, the Commission added *pro forma* LGIA article 5.9.2, which details the terms for provisional interconnection service.[68] 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.[69] The

[64] Order No. 845, 163 FERC ¶ 61,043 at P 438.

[65] *Id.* P 441.

[66] *Pro forma* LGIP § 1 (Definitions); *pro forma* LGIA art. 1 (Definitions).

[67] *Id*. 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.

[68] Order No. 845, 163 FERC ¶ 61,043 at P 438; *see also pro forma* LGIP § 5.9.2.

[69] Order No. 845, 163 FERC ¶ 61,043 at P 448.

Commission stated that interconnection customers are responsible for the costs for performing these provisional interconnection studies.[70]

a. Tucson's Compliance Filing

41. Tucson proposes revisions to adopt the Commission's *pro forma* definitions related to provisional interconnection service and the *pro forma* language in LGIA article 5.9.2 without modification. Tucson proposes to fill in the bracketed section of article 5.9.2 to state that it will study and update the maximum permissible output of the generating facility subject to a provisional LGIA on an annual basis.[71]

42. Tucson states that, although not specifically required in Order Nos. 845 and 845-A, it proposes to revise Appendix 1 of the LGIP (Interconnection Request for Large Generator Interconnection Facility) to allow interconnection customers to use Appendix 1 to submit requests for provisional interconnection service. Tucson requests that the Commission find these revisions to Appendix 1 consistent with or superior to those in Order Nos. 845 and 845-A.[72]

b. Commission Determination

43. We find that Tucson's proposed LGIP and *pro forma* LGIA revisions regarding provisional interconnection service comply with the requirements of Order Nos. 845 and 845-A because Tucson proposes to adopt the Commission's *pro forma* LGIP and *pro forma* LGIA provisions without modification, except to fill in the bracketed section in *pro forma* LGIA article 5.9.2 to state that it will study and update the maximum permissible output of the generating facility subject to a provisional LGIA on an annual basis.

44. Additionally, we find Tucson's proposed revisions reflected in Appendix 1 of the LGIP to allow interconnection customers to submit requests for provisional interconnection service through that form provides an orderly means for Tucson to obtain information from existing interconnection queue customers seeking provisional interconnection service. We find Tucson's proposed revisions to Appendix 1 are

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[70] *Id.* P 448.

[71] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP § 1 (Definitions), LGIA arts. 1 (Definitions), 5.9.2 (Provision Interconnection Service).

[72] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP app. 1 (Interconnection Request for a Large Generating Facility).

consistent with or superior to the *pro forma* LGIP because the revisions add clarity for those customers seeking provisional interconnection service from Tucson.

10. Surplus Interconnection Service

45. 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.[73] Surplus interconnection service enables a new interconnection customer to utilize the unused portion of an existing interconnection customer's interconnection service within specific parameters.[74] 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.[75] 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.[76] 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.[77] 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 service at the point of interconnection may be used.[78] When the original interconnection customer, the surplus interconnection service customer, and the

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

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

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

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

[77] Order No. 845, 163 FERC ¶ 61,043 at PP 455 and 467.

[78] *Id.* P 481.

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.[79]

a. Tucson's Compliance Filing

46. Tucson proposes revisions to sections 1, 3.3, and 3.3.1 of its LGIP, and article 1 of its *pro forma* LGIA, to comply with the Commission's directives in Order Nos. 845 and 845-A.[80] Tucson adopts 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.

47. Additionally, Tucson proposes further revisions to its LGIP and LGIA that describe the expedited process for surplus interconnection service. Tucson proposes a new paragraph in section 3.3.1 of its LGIP, which provides that requests for surplus interconnection service will be (1) submitted using the application format contained in Attachment 1 of the LGIP; (2) submitted in accordance with the business practices posted on Tucson's website; and (3) processed outside of the regular generator interconnection queue. Additionally, Tucson proposes new section 3.3.2, which describes eligibility requirements for customers seeking surplus interconnection service; sections 3.3.3 and 3.3.4, which describe the procedures for conducting necessary studies for surplus interconnection service; section 3.3.5, which describes procedures to develop an agreement for surplus interconnection service; and section 3.3.6, which describes procedures for dispute resolution during the surplus interconnection service process.[81]

48. Tucson also explains that, although not specifically required in Order Nos. 845 and 845-A, it proposes to revise Appendix 1 of the LGIP (Interconnection Request for a Large Generating Facility) to allow interconnection customers to submit requests for

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[79] *Id.* P 499.

[80] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP §§ 1 (Definitions), 3.3 (Utilization of Surplus Interconnection Service), 3.3.1 (Surplus Interconnection Service Requests), LGIA art. 1 (Definitions).

[81] Tucson July 12, 2019 Amended Filing at 1-2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP §§ 3.3.1 (Surplus Interconnection Service Requests), 3.3.2 (Customer Identification) 3.3.3 (Surplus Interconnection Service System Impact Study), 3.3.4 (Surplus Interconnection Service Facilities Study), 3.3.5 (Surplus Interconnection Service Agreement), 3.3.6 (Dispute Resolution).

surplus interconnection service. Tucson requests that the Commission find these proposed revisions consistent with or superior to those in Order Nos. 845 and 845-A.[82]

b. Commission Determination

49. We find that Tucson's proposed Tariff revisions regarding surplus interconnection service comply with the requirements of Order Nos. 845 and 845-A because Tucson adopts the *pro forma* definition of surplus interconnection service and *pro forma* provisions in LGIP sections 3.3 and 3.3.1 without modification. We also find that Tucson's proposed process for evaluating surplus interconnection service complies with the requirements of Order Nos. 845 and 845-A. The process provides that Tucson will evaluate surplus interconnection service requests outside of its non-surplus interconnection queue. Additionally, as required by Order Nos. 845 and 845-A, Tucson's proposed 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.

11. Material Modifications and Incorporation of Advanced Technologies

50. 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,[83] 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. 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

[82] Filing at 2; *see also* Tucson OATT, attach. I-3 (8.0.1), LGIP app. 1 (Interconnection Request for a Large Generating Facility).

[83] 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.

the transmission provider will follow to assess whether an interconnection customer's proposed technological advancement is a material modification.[84]

51. 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.[85] 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.[86]

52. 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 proposed technological advancement is a material modification.[87] 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.[88] 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.[89]

53. Further, the Commission required that the technological change procedure outline a time frame of no more than thirty (30) days after the interconnection customer submits a formal technological advancement request for the transmission provider to perform and complete any necessary additional studies.[90] The Commission also found that, if the

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[84] *Id.* P 518; *see also pro forma* LGIP § 4.4.6.

[85] Order No. 845, 163 FERC ¶ 61,043 at P 519.

[86] *Id.*

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

[88] Order No. 845, 163 FERC ¶ 61,043 at P 521.

[89] *Id.*

[90] *Id.* P 535.

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.[91] 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.[92]

54. 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 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.[93]

a. Tucson's Compliance Filing

55. Tucson proposes revisions to its LGIP that incorporate a definition of permissible technological advancement to section 1 of its LGIP and a new section 4.4.6 (Technological Change Procedure) to the LGIP. Specifically, Tucson proposes the following definition in its LGIP:

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[91] *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.*

[92] *Id.* P 522.

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

> **Permissible Technological Advancement** shall mean modification to equipment that (1) results in electrical performance that is equal to or better than the electrical performance expected prior to the technology change, (2) does not cause any reliability concerns, (3) does 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) and (4) does not have a material impact on the cost or timing of any Interconnection Request with a later queue priority date, and is therefore not a Material Modification. A Permissible Technological Advancement is a change in equipment that may achieve cost or grid performance efficiencies that may include turbines, inverters, plant supervisory controls or other devices that may affect a generating facility's ability to provide ancillary services but does not include changes in generation technology type or fuel type.[94]

56. Section 4.4.6 to its LGIA sets forth Tucson's proposed technological change procedure. The procedure states that an interconnection customer may submit a request to make a technological change prior to the return of the executed interconnection facility study agreement. Tucson will require a description of the proposed technological change in the request, together with details necessary to evaluate whether the change is a material modification. The request must also identify information the interconnection customer previously provided that will change as a result of the technological change. Proposed section 4.4.6 states that if the proposed technological change will not materially change information previously provided, then Tucson will inform the interconnection customer that the proposed change is not a material modification. However, if the proposed technological change materially changes information previously provided, then (1) Tucson will notify the interconnection customer that an evaluation is necessary to determine whether the proposed change is a material modification; (2) the interconnection customer will provide a $10,000 study deposit within five (5) business days of notification; and (3) within thirty (30) calendar days after receiving the information and study deposit, Tucson will evaluate whether the proposed change materially impacts the timing and costs of lower queued customers and will notify the interconnection customer of the results.[95]

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[94] Tucson OATT, attach. I-3 (8.0.1), LGIP § 1 (Definitions).

[95] Tucson OATT, attach. I-3 (8.0.1), LGIP § 4.4.6 (Technological Change Procedure).

b. Commission Determination

57. We find that Tucson's proposed LGIP revisions to incorporate a definition of a permissible technological advancement and technological change procedure partially comply with the requirements of Order Nos. 845 and 845-A. Specifically, we find that Tucson's proposed definition of permissible technological advancement meets the Commission's requirement to provide a category of technological change that does not constitute a material modification.[96]

58. Order No. 845 also requires that the technological change procedure explain how the transmission provider will evaluate the technological advancement request to determine whether it is a material modification.[97] Tucson's proposed LGIP revisions do not explain how it will evaluate the technological advancement request to determine whether it is a material modification. Accordingly, we direct Tucson to file, within sixty (60) days of the date of this order, a further compliance filing revising its LGIP to provide a more detailed explanation of the studies that Tucson will conduct to determine whether the technological advancement request will result in a material modification.

59. 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 thirty (30) days of the initial request.[98] However, Tucson's proposed revisions to section 4.4.6 of its Tariff provide that Tucson will complete its evaluation within thirty (30) days after receiving the required information and study deposit from the interconnection customer. Under Tucson's proposed technological change procedure, after receiving a formal technological advancement request, Tucson would then provide notification that an evaluation is required, and then the interconnection customer has up to five (5) business days to submit the study deposit. Because the thirty (30) day timeframe only begins after Tucson receives the study deposit, Tucson could complete its evaluation more than thirty (30) days after receiving a formal technological advancement request under the proposed technological change procedure. As the Commission stated in Order No. 845, a thirty (30) day deadline adds certainty to the interconnection process.[99] Accordingly, we direct Tucson to file, within sixty (60) days of the date of this order, a further compliance filing that revises its proposed technological change procedure to provide that Tucson will

[96] Order No. 845, 163 FERC ¶ 61,043 at PP 530-531.

[97] *Id.* P 521; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

[98] Order No. 845, 163 FERC ¶ 61,043 at P 535.

[99] *Id.*

determine whether or not a technological advancement is a material modification within thirty (30) calendar days of receipt of the initial request.

60. Further, because Tucson's filing is silent on whether it will provide an explanation to the interconnection customer regarding why the technological advancement is a material modification, we reiterate that the transmission provider is required to do so if it cannot accommodate a proposed technological advancement without triggering the material modification provision of the *pro forma* LGIP.[100]

The Commission orders:

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

(B) Tucson is hereby directed to submit a further compliance filing within sixty (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.

[100] *Id.* P 522.