

170 FERC ¶ 61,116
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Louisville Gas and Electric Company

Docket Nos. ER19-1916-000
ER19-1916-001

ORDER ON COMPLIANCE

(Issued February 20, 2020)

1. On May 21, 2019, as amended on July 10, 2019, Louisville Gas and Electric Company and Kentucky Utilities Company (LG&E/KU) submitted proposed revisions to their 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 LG&E/KU's filing partially complies with the requirements of Order Nos. 845 and 845-A. Accordingly, we accept LG&E/KU's compliance filing, effective May 22, 2019, and direct LG&E/KU 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

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, *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 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 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

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.

4. Second, to promote more informed interconnection decisions, the Commission: (1) required transmission providers to outline and make public a method for determining 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. LG&E/KU’s Compliance Filing

6. LG&E/KU propose changes to their LGIP and *pro forma* LGIA, contained in Attachment M of their Tariff, to incorporate the Commission’s *pro forma* LGIP and *pro forma* LGIA reforms, as required by Order Nos. 845 and 845-A.¹² LG&E/KU state

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.

¹² LG&E/KU May 21, 2019 Compliance Filing at 1.

that they adopted, with minor deviations, the *pro forma* LGIP and *pro forma* LGIA language in the following reform areas: interconnection customer's option to build, dispute resolution, definition of contingent facilities, transparency regarding study models and assumptions, definition of a generating facility, interconnection study deadlines, requesting interconnection service below generating facility capacity, and provisional interconnection service.

7. LG&E/KU propose Tariff revisions in instances where the Commission required modifications to the *pro forma* LGIP and *pro forma* LGIA but afforded transmission providers discretion to develop their own tariff language. Specifically, LG&E/KU propose Tariff revisions to implement reforms in the following areas: identification of contingent facilities, surplus interconnection service, and material modifications and incorporation of advanced technologies.

8. LG&E/KU also propose deviations that, they assert, are consistent with or superior to the changes adopted in Order Nos. 845 and 845-A. In particular, LG&E/KU propose deviations throughout their proposal to reflect their Tariff's existing division of responsibilities between LG&E/KU, as the transmission owner, and an independent transmission organization (ITO),¹³ rather than a "Transmission Provider" as provided for in the Commission's *pro forma* LGIP and *pro forma* LGIA.¹⁴ Under Attachment P (Functions of the Reliability Coordinator and the ITO) of LG&E/KU's Tariff, the ITO administers the terms of the Tariff and is responsible for receiving and approving/denying transmission and generator interconnection service requests, including available transfer capacity evaluation, performing system impact studies or feasibility analysis studies as provided under the Tariff, validating interchange schedules, reviewing and approving all planning activities, and operating and maintaining LG&E/KU's Open Access Same-time Information System (OASIS) site.¹⁵ LG&E/KU, in their role as the transmission owner,

¹³ The current independent transmission organization for LG&E/KU is TranServ International, Inc. LG&E/KU, OATT, attach. Q (Agreements between the Transmission Owner and the ITO and the Reliability Coordinator). *See Louisville Gas and Elec. Co.*, 137 FERC ¶ 61,195, at P 37 (2011) (conditionally approving LG&E/KU's proposal to appoint TranServ as their ITO and changing certain aspects of the ITO arrangement); *Louisville Gas and Elec. Co.*, 114 FERC ¶ 61,282, at P 4 (2006) (approving LG&E/KU's application to exit the Midwest Independent Transmission System Operator, Inc. and resuming operation as a stand-alone transmission system under a Commission-approved open access transmission tariff).

¹⁴ Filing at 2, n.8.

¹⁵ LG&E/KU, OATT, attach. P (Functions of the Reliability Coordinator and the ITO).

provides transmission service to customers.¹⁶ Therefore, LG&E/KU explain that certain responsibilities are split between the ITO and LG&E/KU while, in other instances, both the ITO and LG&E/KU will execute tasks.¹⁷ Specifically, LG&E/KU propose Tariff revisions to recognize the division of responsibilities between the ITO and the transmission owner in the following reform areas: identification of contingent facilities, transparency regarding study models and assumptions, interconnection study metrics reporting, requesting interconnection service below generating facility capacity, provisional interconnection service, surplus interconnection service, and material modifications and incorporation of advanced technologies.

9. Additionally, LG&E/KU propose to update their Interim LGIA¹⁸ in a manner that LG&E/KU contend will maintain consistency with their revised LGIP and *pro forma* LGIA required under Order Nos. 845 and 845-A.¹⁹ LG&E/KU also propose revisions to Appendix 1 to their LGIP (Interconnection Request for a Large Generating Facility) to add language to enable an interconnection customer to request surplus interconnection service or provisional interconnection service.²⁰

10. LG&E/KU request that the proposed Tariff revisions become effective on May 22, 2019.²¹

III. Notice and Responsive Pleadings

11. Notice of LG&E/KU's compliance filing was published in the *Federal Register*, 84 Fed. Reg. 24,500 (2019), with interventions and protests due on or before June 11, 2019. None was filed.

¹⁶ See *Louisville Gas and Elec. Co.*, 137 FERC ¶ 61,195 at P 37.

¹⁷ Filing at 2.

¹⁸ The Interim LGIA governs interconnection service that allows the interconnection customer to connect its generating facility to LG&E/KU's transmission system and be eligible to deliver the facility's electric output on a temporary basis while the interconnection customer's interconnection request completes the interconnection study process. LG&E/KU, OATT, § 1 (Definitions). See also *E.ON U.S. LLC*, 133 FERC ¶ 61,165 (2010) (accepting LG&E/KU's proposal for an Interim LGIA).

¹⁹ Filing at 2. See LG&E/KU, OATT, attach. M, app. 9 (Interim Large Generator Interconnection Agreement).

²⁰ Filing at 5.

²¹ *Id.* at 1, 6.

12. On June 13, 2019, Commission staff issued a deficiency letter that requested additional clarification regarding LG&E/KU's procedure for allowing surplus interconnection service (Deficiency Letter). On July 10, 2019, LG&E/KU filed their response to the Deficiency Letter (Deficiency Response), amending their May 21, 2019 compliance filing. Notice of LG&E/KU's Deficiency Response and amendment was published in the *Federal Register*, 84 Fed. Reg. 33,931 (2019), with interventions and protests due on or before July 31, 2019. None was filed.

IV. Discussion

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

A. Proposed Variations

14. As discussed further below, LG&E/KU have 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. 2003.²² 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.²³ 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.²⁴ 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.²⁵ We will evaluate

²² Order No. 845, 163 FERC ¶ 61,043 at P 43.

²³ *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 104 FERC ¶ 61,103, at P 26 (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).

²⁴ *See, e.g., Nev. Power Co.*, 167 FERC ¶ 61,086, at P 3 (2019).

²⁵ Order No. 2003, 104 FERC ¶ 61,103 at P 826; Order No. 2003-A, 106 FERC ¶ 61,220 at P 45.

LG&E/KU's proposed variations from the requirements of Order Nos. 845 and 845-A accordingly.

B. Interconnection Customer's Option to Build

15. 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.²⁶ 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.²⁷ 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."²⁸

16. 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;²⁹ and (2) clarify that the option to build does not apply to stand alone network upgrades on affected systems.³⁰ 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.³¹ In addition, the Commission clarified that the revised option to build provisions apply to all public utility transmission

²⁶ Order No. 845, 163 FERC ¶ 61,043 at PP 85-87.

²⁷ Order No. 2003, 104 FERC ¶ 61,103 at P 353; *see also pro forma* LGIP § 5.1.3.

²⁸ Order No. 845, 163 FERC ¶ 61,043 at P 85.

²⁹ Order No. 845-A, 166 FERC ¶ 61,137 at P 68.

³⁰ *Id.* P 61.

³¹ *Id.* P 75.

providers, including those that reimburse the interconnection customer for network upgrades.³²

1. LG&E/KU's Compliance Filing

17. LG&E/KU propose revisions to section 1 of their LGIP to incorporate the *pro forma* LGIP definition of the term “Stand Alone Network Upgrades” adopted in Order No. 845-A, with some deviations.³³ Specifically, LG&E/KU propose deviations to reference the “Transmission Owner” instead of the “Transmission Provider,” consistent with their existing LGIP and *pro forma* LGIA language.³⁴

18. LG&E/KU also propose revisions to their *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, with some deviations.³⁵ Specifically, LG&E/KU's proposed revisions omit the following language in the first sentence of *pro forma* LGIA article 5.1.4:

If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives, or the procurement and construction of all facilities other than Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build under Article 5.1.3).[³⁶

2. Commission Determination

19. We find that LG&E/KU's proposed Tariff revisions regarding the option to build partially comply with the requirements of Order Nos. 845 and 845-A, as they largely adopt the revisions to the Commission's *pro forma* LGIA and *pro forma* LGIP required by Order Nos. 845 and 845-A. We further find that LG&E/KU's proposed deviations to

³² *Id.* P 33.

³³ Filing at 3.

³⁴ LG&E/KU, OATT, attach. M, § 1 (Definitions) and app. 6 (LGIA).

³⁵ Filing at 3.

³⁶ The italics indicate language in *pro forma* LGIA section 5.1.4 that the Commission adopted in Order No. 845 but that LG&E/KU's Tariff revisions do not include. See Order No. 845, 163 FERC ¶ 61,043 at PP 81, 85, and app. C.

the definition of “Stand Alone Network Upgrades” to reference the “Transmission Owner” instead of the “Transmission Provider” are consistent with or superior to the Commission’s *pro forma* LGIP and *pro forma* LGIA because they reflect the delegation of responsibilities between the ITO and LG&E/KU as the transmission owner consistent with Attachment P of the Tariff. However, we find that LG&E/KU’s proposed revisions to article 5.1.4 of their *pro forma* LGIA do not fully incorporate the *pro forma* LGIA language required by Order No. 845, and LG&E/KU do not justify this departure.³⁷ Accordingly, we direct LG&E/KU to submit, within 60 days of the date of this order, a further compliance filing to incorporate the complete revisions to article 5.1.4 of the *pro forma* LGIA, as required by Order No. 845.

C. 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.³⁸ 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.³⁹

1. LG&E/KU’s Compliance Filing

21. LG&E/KU propose the addition of new section 14.5.5 to their LGIP to incorporate the Commission’s required provisions to establish interconnection dispute resolution procedures to allow a disputing party to unilaterally seek non-binding dispute resolution.⁴⁰ New section 14.5.5 contains the language required by Order No. 845, as well as language that provides further details on the process, such as notices to the other party or parties, steps in appointing a neutral decision-maker, and timelines for the

³⁷ The first sentence of article 5.1.4 of LG&E/KU’s *pro forma* LGIA should include the italicized language: “*If the dates designated by Interconnection Customer are not acceptable to Transmission Provider . . .*”, as required by Order No. 845. See Order No. 845, 163 FERC ¶ 61,043 at PP 81, 85, & app. C.

³⁸ *Id.* P 133; see also *pro forma* LGIP § 13.5.5.

³⁹ Order No. 845, 163 FERC ¶ 61,043 at P 139.

⁴⁰ See *id.* P 135; see also Filing at n.13.

parties' responses and the decision-maker's decision.⁴¹ These deviations include a description of the information a party must include in a written "Request for Non-binding Dispute Resolution" and provide to the other party in the dispute, including: the disputing party's representative, the identity of the party(ies) with whom the dispute is being raised, a summary of the factual information giving rise to the dispute, citations to any legal authority governing the dispute, and the disputing party's desired outcome of the dispute resolution process. Other deviations include language to describe the composition and timing of decisions to be issued by the neutral decision-maker and a description of the procedures and timing parties will follow to select a neutral decision-maker, as opposed to the procedure contained in the *pro forma* LGIA language wherein this selection is made by the "transmission provider."⁴²

2. Commission Determination

22. We find that LG&E/KU's proposed LGIP revisions regarding dispute resolution comply with the requirements of Order Nos. 845 and 845-A because they incorporate the Commission's required provisions into section 14.5.5 of LG&E/KU's LGIP. We also find that LG&E/KU's proposed deviations are consistent with or superior to the changes adopted in Order Nos. 845 and 845-A because they provide additional clarity and specific details of the dispute resolution process, as required by Order Nos. 845 and 845-A.

D. 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.⁴³ The Commission also added new section 3.8 to the *pro forma* LGIP, which requires transmission providers to include,

⁴¹ Order No. 845, 163 FERC ¶ 61,043 at P 135; Filing at 3; *see also* LG&E/KU, OATT, attach. M, § 14.5.5. LG&E/KU explain that section 13 of their LGIP addresses interim interconnection service, while dispute resolution provisions are contained in section 14; therefore, LG&E/KU propose to incorporate the required language from section 13.5.5 of the Commission's *pro forma* LGIP into section 14.5.5 of their LGIP. Filing at n.12.

⁴² *See* LG&E/KU, OATT, attach. M, § 14.5.5, *compare with* Order No. 845, 163 FERC ¶ 61,043 at P 133.

⁴³ Order No. 845, 163 FERC ¶ 61,043 at P 218; *see also pro forma* LGIP § 1 (Definitions).

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.⁴⁴ 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.⁴⁵ The Commission stated that this transparency will ensure that the method is applied on a non-discriminatory basis.⁴⁶ 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.⁴⁷

1. LG&E/KU's Compliance Filing

24. LG&E/KU adopt the Commission's *pro forma* LGIP definition of "Contingent Facilities." LG&E/KU also propose revisions to their LGIP to include detail regarding their process to identify contingent facilities in section 3.8 of their LGIP.⁴⁸ LG&E/KU propose a two-part method for determining contingent facilities that includes a steady-state analysis and a stability/short circuit analysis. To identify whether any steady-state-related contingent facilities exist for a later-queued interconnection request, LG&E/KU propose to calculate a distribution factor for the constraint driving each steady-state-related facility or network upgrade related to all prior-queued generator interconnection requests. If the distribution factor meets the threshold established in the LG&E/KU interconnection study criteria posted on LG&E/KU's OASIS, then that steady-state-related interconnection facility or network upgrade is deemed to be a contingent facility. To identify whether any stability or short circuit-related contingent facilities exist for a later-queued interconnection request, LG&E/KU propose to review the location of the point of interconnection. If the point of interconnection of a prior-queued interconnection request is not a sufficient distance away from the interconnection request, as established in the LG&E/KU interconnection study criteria, then any stability or short circuit-related interconnection facility or network upgrade associated with the prior-

⁴⁴ Order No. 845, 163 FERC ¶ 61,043 at P 199.

⁴⁵ *Id.*; *see also pro forma* LGIP § 3.8.

⁴⁶ Order No. 845, 163 FERC ¶ 61,043 at P 200.

⁴⁷ *Id.* P 199; *see also pro forma* LGIP § 3.8.

⁴⁸ Filing at 3; LG&E/KU, OATT, attach. M, § 3.8.

queued interconnection request will be assessed to determine whether it is a contingent facility for the interconnection request being studied.

2. Commission Determination

25. We find that the revised provisions that identify and describe LG&E/KU's method for determining contingent facilities, as LG&E/KU propose in their LGIP, partially comply with the requirements of Order Nos. 845 and 845-A. We find that LG&E/KU comply with the requirements of Order Nos. 845 and 845-A because LG&E/KU have adopted the definition of contingent facilities and the language regarding the need for LGIP section 3.8 to include a method for identification of contingent facilities without modification. Further, LG&E/KU'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.

26. However, as specified in Order No. 845, transmission providers must include, in section 3.8 of their LGIPs, a method for determining contingent facilities.⁴⁹ The Commission required that this method provide sufficient transparency to determine why a specific contingent facility was identified and how it relates to the interconnection request.⁵⁰ 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.⁵¹ LG&E/KU'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 LG&E/KU will use as part of its method to identify contingent facilities. Without this information, an interconnection customer will not understand how LG&E/KU will evaluate potential contingent facilities to determine their relationship to an individual interconnection request.⁵² Further, including provisions regarding specific thresholds or criteria in LG&E/KU's LGIP will ensure LG&E/KU's technical screens or analyses will be applied to interconnection requests on a consistent, not unduly discriminatory or preferential basis.

⁴⁹ Order No. 845, 163 FERC ¶ 61,043 at P 199.

⁵⁰ *Id.* P 200.

⁵¹ *Id.*

⁵² *See pro forma* LGIP § 3.8 ("The method shall be sufficiently transparent to determine why a specific Contingent Facility was identified.").

27. We therefore direct LG&E/KU to describe in section 3.8 of its LGIP the specific technical screens and/or analyses that it will employ to determine which facilities are contingent facilities. Further, we also direct LG&E/KU to describe the specific triggering thresholds or criteria, including the quantitative triggers, that are applied to identify a facility as a contingent facility. In Order No. 845, 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.⁵³ However, if, for instance, a transmission provider chooses to use a distribution factor analysis as a technical screen for determining how a new generating facility impacts the surrounding electrically-relevant facilities, its tariff must specify the triggering percentage impact that causes a facility to be considered contingent. Similarly, if a transmission provider relies on the system impact study to identify which facilities the new generating facility will impact, it must specify in its tariff which power system performance attributes (voltages, power flows, etc.) violated a specific threshold of a facility⁵⁴ such that the transmission provider would conclude that the facility is contingent for the new generating facility. A transmission provider may use multiple screens or analyses as part of its method, but it must include a corresponding, specific triggering threshold or criterion to indicate how it will apply each screen or analysis.

28. Because LG&E/KU has not provided the specificity outlined above and thus does not fully comply with the contingent facility requirements of Order Nos. 845 and 845-A, we direct LG&E/KU to submit a further compliance filing, within 60 days of the date of this order, which adds in section 3.8 of LG&E/KU 's LGIP (1) the method LG&E/KU will use to determine contingent facilities, including technical screens or analyses it proposes to use to identify these facilities, and (2) 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, as discussed above.

E. Transparency Regarding Study Models and Assumptions

29. 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 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

⁵³ Order No. 845, 163 FERC ¶ 61,043 at P 220.

⁵⁴ For example, a range for facility per unit voltage may constitute a specific triggering threshold, beyond which the transmission provider will identify the facility as contingent.

the most recent interconnection study and be representative of current system conditions.”⁵⁵ 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).⁵⁶

30. 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.⁵⁷ 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.⁵⁸ 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.⁵⁹

1. LG&E/KU Compliance Filing

31. LG&E/KU propose revisions to section 2.3 of their LGIP to incorporate the Commission’s *pro forma* LGIP revisions as required by Order Nos. 845 and 845-A, with some deviations. Specifically, LG&E/KU propose to modify section 2.3 of their LGIP to clarify that the ITO is responsible for maintaining the models used in conducting interconnection studies, while the transmission owner is responsible for posting this information. LG&E/KU further state that, consistent with this approach, they also propose to modify section 2.3 of their LGIP to state that the transmission owner may require the execution of a confidentiality agreement before the release of commercially-sensitive information or CEII in the base case data.⁶⁰

⁵⁵ *Id.* P 236.

⁵⁶ *Id.*; *see also pro forma* LGIP § 2.3.

⁵⁷ Order No. 845-A, 166 FERC ¶ 61,137 at P 84 (citing Order No. 845, 163 FERC ¶ 61,043 at P 241).

⁵⁸ *Id.* P 85 (citing 18 C.F.R. § 388.113(g)(5)(i) (2019)).

⁵⁹ *Id.* P 88.

⁶⁰ Filing at 4; *see also* LG&E/KU, OATT, attach. M, § 2.3 (Base Case Data).

2. Commission Determination

32. We find that LG&E/KU's proposed LGIP revisions regarding study models and assumptions comply with the requirements of Order Nos. 845 and 845-A because they adopt the Commission's *pro forma* LGIP revisions with the deviations described above. We find LG&E/KU's proposed deviations to be consistent with or superior to the changes adopted in Order Nos. 845 and 845-A because they reflect the delegation of responsibilities between the ITO and the transmission owner consistent with Attachment P of the Tariff.⁶¹

F. Definition of Generating Facility

33. 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 follows:

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.⁶²

34. 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.⁶³

1. LG&E/KU's Compliance Filing

35. LG&E/KU propose revisions to section 1 of their LGIP and *pro forma* LGIA to incorporate the language adopted by Order Nos. 845 and 845-A without modification.⁶⁴

⁶¹ See LG&E/KU, OATT, attach. P (Functions of the Reliability Coordinator and the ITO).

⁶² Order No. 845, 163 FERC ¶ 61,043 at P 275 (additions italicized); *see also pro forma* LGIP § 1 (Definitions).

⁶³ Order No. 845, 163 FERC ¶ 61,043 at P 275.

⁶⁴ LG&E/KU, OATT, attach. M, § 1 (Definitions).

2. Commission Determination

36. We find that LG&E/KU's revisions regarding the definition of a "Generating Facility" comply with the requirements of Order Nos. 845 and 845-A because LG&E/KU adopt the Commission's *pro forma* LGIP and *pro forma* LGIA provisions without modification.

G. Interconnection Study Deadlines

37. 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.⁶⁵ 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.⁶⁶ 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.⁶⁷ 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.⁶⁸ 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 2020.⁶⁹

1. LG&E/KU's Compliance Filing

38. LG&E/KU propose revisions to their LGIP to add new sections 3.5.2, 3.5.3, and 3.5.4 to incorporate the Commission's required provisions and establish procedures to track and post statistics on interconnection studies, with some deviations. LG&E/KU

⁶⁵ Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP §§ 3.5.2, 3.5.3.

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

⁶⁷ Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP § 3.5.4.

⁶⁸ Order No. 845, 163 FERC ¶ 61,043 at P 307.

⁶⁹ Order No. 845-A, 166 FERC ¶ 61,137 at P 107.

explain that, because the ITO is responsible for administering the interconnection study process under LG&E/KU's LGIP, the proposed provisions state that the ITO is responsible for maintaining the required statistics and posting them on LG&E/KU's OASIS and/or website.⁷⁰ LG&E/KU further propose that, if the reporting requirements of section 3.5.4 are triggered, the transmission owner, as the party responsible for making Tariff filings, will submit such reports to the Commission with input from the ITO. Additionally, LG&E/KU propose 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 their Tariff to complete the feasibility, system impact, and facilities studies, respectively.⁷¹

2. Commission Determination

39. We find that the revised provisions that address LG&E/KU's study deadline statistics and informational reporting requirements, as proposed in LG&E/KU's LGIP, comply with the requirements of Order Nos. 845 and 845-A. LG&E/KU's proposed Tariff revisions incorporate the Commission's requirements in sections 3.5.2, 3.5.3, and 3.5.4 of the Commission's *pro forma* LGIP, and LG&E/KU's proposed Tariff revisions appropriately replace the bracketed placeholders with timelines that align with the timelines already in their Tariff. We further find LG&E/KU's proposed deviations to be consistent with or superior to the changes in Order Nos. 845 and 845-A because they reflect the delegation of responsibilities between the ITO and the transmission owner consistent with Attachment P of LG&E/KU's Tariff.⁷²

H. Requesting Interconnection Service below Generating Facility Capacity

40. 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,⁷³ recognizing the need for proper control technologies and flexibility for transmission

⁷⁰ Filing at 4.

⁷¹ LG&E/KU, OATT, attach. M, §§ 3.5.2.1, 3.5.2.2., and 3.5.2.3.

⁷² See LG&E/KU, OATT, attach. P (Functions of the Reliability Coordinator and the ITO).

⁷³ 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.

providers to propose penalties to ensure that the generating facility does not inject energy above the requested level of service.⁷⁴

41. 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.⁷⁵ 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.

42. 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.⁷⁶

43. 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

⁷⁴ Order No. 845, 163 FERC ¶ 61,043 at P 367; *see also pro forma* LGIP §§ 3.1, 6.3, 7.3, 8.2, *pro forma* LGIP app. 1.

⁷⁵ Order No. 845, 163 FERC ¶ 61,043 at PP 383-384.

⁷⁶ *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.*

prior to returning to the transmission provider an executed system impact study agreement or an executed facilities study agreement.⁷⁷

1. LG&E/KU's Compliance Filing

44. LG&E/KU propose revisions to their LGIP to adopt the Commission's *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, with some deviations.⁷⁸ In particular, LG&E/KU propose to add language to section 3.1 to incorporate the Commission's requirements with a deviation to stipulate that the transmission owner shall have a process in place for consideration of requests for interconnection service below the generating facility capacity, but the process will be implemented by the ITO.⁷⁹ LG&E/KU also propose, in sections 4.4.1 and 4.4.2 of their LGIP, to modify the *pro forma* LGIP language to require both the transmission owner and the ITO to approve injection-limiting equipment resulting in a decrease in interconnection service level.⁸⁰ LG&E/KU also propose, in section 6.3 of their LGIP, to modify the *pro forma* LGIP language to clarify that the ITO is the party that will study interconnection requests.⁸¹ LG&E/KU also state that they will update their interconnection study criteria to provide additional detail on how this process will be administered.⁸²

45. LG&E/KU's proposed Tariff revisions do not fully incorporate the *pro forma* LGIP language adopted by Order No. 845.⁸³ 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

⁷⁷ *Id.* P 406; *see also pro forma* LGIP §§ 4.4.1, 4.4.2.

⁷⁸ Filing at 5; LG&E/KU, OATT, attach. M, §§ 3.1, 4.4.1, 4.4.2, 6.3, 7.3, and 8.2 and app. 1.

⁷⁹ Filing at 5; LG&E/KU, OATT, attach. M, § 3.1.

⁸⁰ LG&E/KU, OATT, attach. M, §§ 4.4.1 and 4.4.2.

⁸¹ *Id.* § 6.3.

⁸² Filing at 5.

⁸³ *See* Order No. 845-A, 166 FERC ¶ 61,137 at P 117.

Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by the Interconnection Customer.⁸⁴

2. Commission Determination

46. We find that LG&E/KU'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 LG&E/KU generally incorporate the Commission's *pro forma* LGIP revisions. We find that LG&E/KU's proposed deviation in sections 3.1, 4.4.1, 4.4.2, and 6.3 related to the roles of the transmission owner and ITO are consistent with or superior to the changes adopted in Order Nos. 845 and 845-A because they reflect the delegation of responsibilities between the ITO and the transmission owner consistent with Attachment P of the Tariff. However, as discussed above, LG&E/KU's revisions to section 3.1 of their LGIP omit some of the *pro forma* LGIP language required by Order No. 845.⁸⁵ Accordingly, we direct LG&E/KU to file, within 60 days of the date of this order, a further compliance filing that incorporates the *pro forma* revisions to section 3.1 of their LGIP, as required by Order No. 845.

I. Provisional Interconnection Service

47. In Order No. 845, the Commission required transmission providers to allow all interconnection customers to request provisional interconnection service.⁸⁶ 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.⁸⁷ To implement this service, the Commission revised the *pro forma* LGIP and *pro forma* LGIA to add a definition for "Provisional

⁸⁴ 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 LG&E/KU'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.

⁸⁵ *Id.* PP 347, 367, & app. B.

⁸⁶ *Id.* P 438.

⁸⁷ *Id.* P 441.

Interconnection Service”⁸⁸ and for a “Provisional Large Generator Interconnection Agreement.”⁸⁹

48. In addition, the Commission added *pro forma* LGIA article 5.9.2, which details the terms for provisional interconnection service.⁹⁰ 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.⁹¹ The Commission stated that interconnection customers are responsible for the costs for performing these provisional interconnection studies.⁹²

1. LG&E/KU’s Compliance Filing

49. LG&E/KU propose Tariff revisions to adopt the Commission’s *pro forma* definition of “Provisional Interconnection Service” and *pro forma* language in article 5.9.2 of their LGIA, with some deviations to clarify the role of the ITO and transmission owner with respect to provisional interconnection service.⁹³ LG&E/KU propose to add language within the definition of “Provisional Interconnection Service” to specify that the interconnection service will be “approved by the ITO and provided by the Transmission Owner.”⁹⁴ Further, in article 5.9.2 of their *pro forma* LGIA, LG&E/KU propose deviations from the language in the Commission’s *pro forma* LGIA to clarify the roles of the transmission owner and the ITO in regard to provisional interconnection service. Specifically, the proposed deviations clarify that: (1) the transmission owner may execute a provisional LGIA or an interconnection customer may request filing of an unexecuted provisional LGIA for limited interconnection service; (2) the ITO will

⁸⁸ *Pro forma* LGIP § 1 (Definitions); *pro forma* LGIA art. 1 (Definitions).

⁸⁹ *Pro forma* LGIP § 1 (Definitions); *pro forma* LGIA 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.

⁹⁰ *Id.* P 438; *see also pro forma* LGIP § 5.9.2.

⁹¹ Order No. 845, 163 FERC ¶ 61,043 at P 448.

⁹² *Id.*

⁹³ Filing at 5.

⁹⁴ LG&E/KU, OATT, attach. M, § 1 (Definitions).

determine if stability, short circuit, thermal, and/or voltage issues would arise due to an interconnection customer interconnecting without modifications to the generating facility or the transmission system; and (3) the ITO will determine whether any interconnection facilities, network upgrades, distribution upgrades, or system protection facilities are necessary in consultation with the transmission owner. Further, LG&E/KU propose that the ITO will study and update the maximum permissible output of the generating facility subject to a provisional LGIA on an annual basis.⁹⁵

2. Commission Determination

50. We find that LG&E/KU's proposed LGIP and *pro forma* LGIA revisions regarding provisional interconnection service comply with the requirements of Order Nos. 845 and 845-A because LG&E/KU propose to adopt the Commission's *pro forma* LGIP and *pro forma* LGIA provisions, with some deviation, and also fill in the bracketed section in *pro forma* LGIA article 5.9.2 to require the ITO to study and update the maximum permissible output of the generating facility subject to a provisional LGIA on an annual basis. We further find that LG&E/KU's proposed deviations in the definition of "Provisional Interconnection Service" and article 5.9.2 of their *pro forma* LGIA are consistent with or superior to the changes adopted in Order Nos. 845 and 845-A because they reflect the delegation of responsibilities between the ITO and LG&E/KU as the transmission owner consistent with Attachment P of the Tariff. In doing so, we note that section 11.3 of the LG&E/KU LGIA requires that the transmission owner file unexecuted final LGIAs with the Commission if requested by the Interconnection Customer.

J. Surplus Interconnection Service

51. 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.⁹⁶ Surplus interconnection service enables a new interconnection customer to utilize the unused portion of an existing interconnection customer's interconnection service within specific parameters.⁹⁷ The Commission required transmission providers to revise their tariffs to include the new definition of surplus interconnection service in their *pro forma* LGIP and

⁹⁵ *Id.* app. 6, art. 5.9.2.

⁹⁶ Order No. 845, 163 FERC ¶ 61,043 at P 467; *see also pro forma* LGIP § 1; *pro forma* LGIA art. 1 (Definitions).

⁹⁷ Order No. 845, 163 FERC ¶ 61,043 at P 467; Order No. 845-A, 166 FERC ¶ 61,137 at P 119.

pro forma LGIA, and provide in the *pro forma* LGIP an expedited interconnection process outside of the interconnection queue for surplus interconnection service.⁹⁸ 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.⁹⁹ 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.¹⁰⁰ 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.¹⁰¹ 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.¹⁰²

1. LG&E/KU's Compliance Filing

52. LG&E/KU propose revisions to sections 1, 3.3, and 3.3.1 to their LGIP, and article 1 to their *pro forma* LGIA, to comply with the Commission's directives in Order Nos. 845 and 845-A. LG&E/KU 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.

53. In their Deficiency Response, LG&E/KU further propose to add sections 3.3.2 through 3.3.6 to their LGIP to provide additional information regarding their expedited surplus interconnection process, which will be documented in a separate surplus

⁹⁸ Order No. 845, 163 FERC ¶ 61,043 at P 467; *see also pro forma* LGIP §§ 3.3, 3.3.1.

⁹⁹ Order No. 845, 163 FERC ¶ 61,043 at P 483; *see also pro forma* LGIP § 3.3.

¹⁰⁰ Order No. 845, 163 FERC ¶ 61,043 at PP 455 & 467.

¹⁰¹ *Id.* P 481.

¹⁰² *Id.* P 499.

interconnection service queue.¹⁰³ LG&E/KU propose that an interconnection customer may offer surplus interconnection service to affiliates or non-affiliates. To request surplus interconnection service, a surplus interconnection customer must submit an interconnection request for a large generating facility and a surplus interconnection service request form to the ITO.¹⁰⁴ LG&E/KU also proposes language to specify that if a generating facility interconnected prior to the issuance of Order No. 2003 and does not have an existing LGIA, surplus interconnection service cannot be offered from that generating facility's existing point of interconnection.¹⁰⁵

54. Once a request is submitted, the ITO will conduct a scoping meeting between the ITO, the transmission owner, the original interconnection customer, and the surplus interconnection customer within 30 calendar days after receipt of a valid surplus interconnection service request.¹⁰⁶ Within five business days of the scoping meeting, the ITO will issue a system impact study agreement, and the surplus interconnection service customer will return the executed system impact study agreement (with a \$25,000 deposit) to the ITO within 30 calendar days of receipt of the system impact study agreement. Then the ITO will use reasonable efforts to complete and provide the system impact study report to the surplus interconnection service customer within 90 calendar days.¹⁰⁷ The ITO will evaluate the original interconnection system impact study to determine its suitability for use in evaluation of the surplus interconnection service request, and if the system impact study identifies any necessary interconnection facilities and/or network upgrades to the transmission owner's transmission system, the surplus interconnection service request will be denied. Within 10 business days of receiving the system impact study report, the surplus interconnection service customer must inform the ITO and the transmission owner in writing of its desire to move forward with a surplus interconnection service agreement.

55. Within 30 calendar days of receiving written confirmation of the surplus interconnection customer's desire to move forward, the ITO will tender a draft surplus interconnection service agreement to the surplus interconnection service customer and original interconnection customer that reflects the (1) term of operation,

¹⁰³ Deficiency Response at 3.

¹⁰⁴ *Id.* See LG&E/KU, OATT, attach. M, § 3.3.2 (Surplus Interconnection Service Request Process).

¹⁰⁵ LG&E/KU, OATT, attach. M, § 3.3.2 (Surplus Interconnection Service Request Process).

¹⁰⁶ *Id.* § 3.3.3 (Surplus Interconnection Service Request Scoping Meeting).

¹⁰⁷ *Id.* § 3.3.4 (Surplus Interconnection Service Impact Study and Agreement).

(2) interconnection service limit, (3) mode of operation for energy production, and (4) roles and responsibilities of the parties for maintaining the operation of the generating facilities.¹⁰⁸ The transmission owner and surplus interconnection service customer will have 60 calendar days to negotiate any disputed provisions of the appendices of the draft surplus interconnection service agreement before the transmission owner files with the Commission the executed surplus interconnection service agreement or the unexecuted surplus interconnection service agreement, if requested by the surplus interconnection service customer.

56. Regarding termination procedures, LG&E/KU propose that: (1) if the original interconnection customer's interconnection service terminates, the surplus interconnection service will terminate; and (2) if the original interconnection customer's generating facility is scheduled to retire and permanently cease commercial operation before the surplus interconnection service customer's generating facilities begins commercial operations, surplus interconnection service will not be offered.¹⁰⁹ Existing surplus interconnection service may continue for up to one year after the original interconnection customer's interconnection service terminates if: (1) the surplus interconnection service customer makes a written request to the transmission owner to extend the surplus interconnection service, (2) the surplus interconnection service customer's generating facility had been studied by the ITO for sole operation at the point of interconnection at the time of the interconnection of the surplus interconnection service customer, and (3) the original interconnection customer agrees in writing that the surplus interconnection service customer may continue to operate at, or up to, the current surplus interconnection service limit. LG&E/KU proposes to make an appropriate filing at the Commission to terminate the surplus interconnection service agreement.¹¹⁰

57. LG&E/KU also state that they have amended their business practice manuals to address the abbreviated process for requesting surplus interconnection service.¹¹¹

2. Commission Determination

58. We find that LG&E/KU's proposed LGIP and *pro forma* LGIA revisions regarding surplus interconnection service partially comply with the requirements of Order Nos. 845 and 845-A. LG&E/KU adopt the Commission's *pro forma* LGIP and *pro forma*

¹⁰⁸ *Id.* § 3.3.5 (Surplus Interconnection Service Agreement).

¹⁰⁹ *Id.* § 3.3.6 (Termination of Surplus Interconnection Service Agreement).

¹¹⁰ *Id.*

¹¹¹ Filing at 5.

LGIA revisions for surplus interconnection service, as required by Order Nos. 845 and 845-A, with some deviations. We find that LG&E/KU's proposed deviations to provide for the division of responsibilities between the transmission owner and the ITO are consistent with or superior to the changes adopted in Order Nos. 845 and 845-A because they reflect the delegation of responsibilities between the ITO and LG&E/KU as the transmission owner consistent with Attachment P of the Tariff.

59. We find certain aspects of LG&E/KU's proposed surplus interconnection service process compliant with the requirements of Order Nos. 845 and 845-A. Under LG&E/KU's proposed process for evaluating surplus interconnection service, LG&E/KU will evaluate surplus interconnection service requests outside of their non-surplus interconnection queue. We accept LG&E/KU's proposed provision requiring that the surplus interconnection service customer make a written request to the transmission owner to extend surplus interconnection service for up to one year after the original interconnection customer's interconnection service terminates because it adds clarity to the surplus interconnection service process.

60. However, the Commission stated in Order Nos. 845 and 845-A that surplus interconnection service be available only up to the level that can be accommodated without creating the need for new network upgrades; it did not restrict the construction of new interconnection facilities¹¹² necessary to accommodate surplus interconnection service.¹¹³ Additionally, the Commission noted in Order No. 845-A that (1) surplus interconnection service will likely require new directly assignable interconnection facilities to connect the surplus interconnection service customer to the original interconnection customer's interconnection facilities and (2) since interconnection facilities are the sole cost responsibility of the relevant interconnection customer, requiring interconnection facilities for a surplus interconnection request will not impact others in the interconnection queue.¹¹⁴ In contrast, LG&E/KU's proposal specifically states that they will not allow surplus interconnection service if the system impact study

¹¹² Interconnection service is defined in the *pro forma* LGIP and *pro forma* LGIA as "the service provided by the Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to the Transmission Provider's Transmission System and enabling it to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Standard Large Generator Interconnection Agreement and, if applicable, the Transmission Provider's Tariff." See, e.g., *pro forma* LGIA art. 1, Definitions; *pro forma* LGIP § 1 (Definitions).

¹¹³ Order No. 845, 163 FERC ¶ 61,043 at P 487; Order No. 845-A, 166 FERC ¶ 61,137 at P 138.

¹¹⁴ Order No. 845-A, 166 FERC ¶ 61,137 at n.283.

identifies a need for new interconnection facilities and/or network upgrades.¹¹⁵ Therefore, we direct LG&E/KU to file, within 60 days of the date of this order, a further compliance filing that revises their LGIP to remove this limitation because surplus interconnection service should be available up to the level that can be accommodated without a need for network upgrades, even if new interconnection facilities are necessary to accommodate the service.

K. Material Modifications and Incorporation of Advanced Technologies

61. 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,¹¹⁶ 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.¹¹⁷ 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.¹¹⁸

62. 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.¹¹⁹ Additionally, the technological change

¹¹⁵ LG&E/KU, OATT, attach. M, § 3.3.4 (Surplus Interconnection Service System Impact Study and Agreement).

¹¹⁶ 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.

¹¹⁷ *Id.* P 518.

¹¹⁸ *Id.*; see also *pro forma* LGIP § 4.4.6.

¹¹⁹ Order No. 845, 163 FERC ¶ 61,043 at P 519.

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.¹²⁰

63. 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.¹²¹ 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.¹²² 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.¹²³

64. 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.¹²⁴ The Commission also found that, if the transmission provider determines that additional studies are needed 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.¹²⁵ 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

¹²⁰ *Id.*

¹²¹ *Id.*; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

¹²² Order No. 845, 163 FERC ¶ 61,043 at P 521.

¹²³ *Id.* P 521

¹²⁴ *Id.* P 535.

¹²⁵ *Id.* P 534. The Commission set the default deposit amount at \$10,000 but stated that a transmission provider may propose a reasonable alternative deposit amount in its compliance filing and include justification supporting this alternative amount. *Id.*

to the interconnection customer regarding why the technological advancement is a material modification.

65. 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.¹²⁶

1. LG&E/KU's Compliance Filing

66. LG&E/KU propose revisions to section 1 of their LGIP to incorporate the following definition for the term "Permissible Technological Advancement:"

Permissible Technological Advancement shall mean a new, upgraded, updated or modified technology that an Interconnection Customer intends to utilize in the operation of generation facilities such as an updated type of turbine, inverter, plant supervisory controls or other advancements, provided that no such advancement may result in a Material Modification.¹²⁷

67. In addition, LG&E/KU propose revisions to section 4.4.2 of their LGIP to adopt the Commission's *pro forma* language without modification.¹²⁸

¹²⁶ Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

¹²⁷ LG&E/KU, OATT, attach. M, §1 (Definitions).

¹²⁸ Filing at 5; LG&E/KU, OATT, attach. M, § 4.4.2.

68. LG&E/KU also propose to add section 4.4.6 to their LGIP to provide a process for consideration of technological changes that can be made without triggering a material modification.¹²⁹ LG&E/KU propose that an interconnection customer may request technological changes before the execution of the interconnection facilities study agreement by submitting to both the transmission owner and the ITO a technological advancement request form, available on LG&E/KU's OASIS. If the interconnection customer demonstrates that the technological change meets specific performance and relay criteria,¹³⁰ then the change will not be considered a material modification. However, if the interconnection customer cannot demonstrate that the change meets the criteria, then the ITO will study the impact of the proposed technological change on the timing and costs of lower-queued customers to determine if it is a material modification.¹³¹

69. LG&E/KU's proposed Tariff revisions state that the ITO will clearly communicate to the interconnection customer any additional information and/or other inputs needed to complete the evaluation.¹³² If the interconnection customer chooses to continue with the technological advancement request, the interconnection customer will execute a material modification study agreement and submit a study deposit of \$10,000 within two calendar days of being notified that a study is required and will compensate the ITO for the actual cost of the evaluation.¹³³ The ITO will complete the evaluation within 30 calendar days of receipt of the technological advancement request and notify the interconnection customer of the results.¹³⁴

¹²⁹ Filing at 5; LG&E/KU, OATT, attach. M, § 4.4.6 (Technological Change Procedure).

¹³⁰ LG&E/KU propose for the performance criteria to use the North American Electric Reliability Corporation's (NERC) transmission planning (TPL) standards, specifically TPL-001, Table 1, P1-P7. For the relay criteria, LG&E/KU propose to use NERC's protection and control (PRC) standards, specifically PRC-024 and PRC-025. *See* LG&E/KU, OATT, attach. M, § 4.4.6 (Technological Change Procedures).

¹³¹ Filing at 5; LG&E/KU, OATT, attach. M, § 4.4.6 (Technological Change Procedure).

¹³² Filing at 5; LG&E/KU, OATT, attach. M, § 4.4.6 (Technological Change Procedure).

¹³³ The difference between the deposit and the actual cost of the evaluation will be paid by, or refunded to, the interconnection customer as appropriate.

¹³⁴ LG&E/KU, OATT, attach. M, § 4.4.6 (Technological Change Procedure).

2. Commission Determination

70. We find that LG&E/KU's proposed LGIP revisions partially comply with the requirements of Order Nos. 845 and 845-A. Specifically, we find that LG&E/KU's proposed definition of "Permissible Technological Advancement" meets the Commission's requirement to provide a category of technological advancement that does not constitute a material modification.¹³⁵ We also find that the proposed revisions to section 4.4.2 of the LGIP incorporate the revisions to section 4.4.2 in the Commission's *pro forma* LGIP adopted by Order Nos. 845 and 845-A.

71. Order No. 845 requires that the technological advancement procedure explain how the transmission provider will evaluate the technological advancement request to determine whether it is a material modification.¹³⁶ We find LG&E/KU's proposed specification of performance and relay criteria¹³⁷ meet the Commission's requirement 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.¹³⁸ However, LG&E/KU's proposed revisions do not explain how the ITO will evaluate a technological advancement request to determine whether it is a material modification if a study is necessary. Accordingly, we direct LG&E/KU to file, within 60 days of the date of this order, a further compliance filing revising their LGIP to provide a more detailed explanation of the studies that the ITO will conduct to determine whether the technological advancement request will result in a material modification.

72. Further, LG&E/KU's technological change procedure states that it will notify the interconnection customer of the study results, but it does not explicitly provide that LG&E/KU or the ITO will provide an explanation to the interconnection customer regarding why the technological advancement is a material modification. Therefore, 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.¹³⁹

¹³⁵ Order No. 845, 163 FERC ¶ 61,043 at PP 530-531.

¹³⁶ *Id.* P 521.

¹³⁷ LG&E/KU, OATT, attach. M, § 4.4.6 (Technological Change Procedures).

¹³⁸ *Id.*; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

¹³⁹ *Id.* P 522.

L. Other Issues Raised by LG&E/KU

1. LG&E/KU Additional Revisions

73. LG&E/KU propose to update their Interim LGIA, which is based on the Commission's *pro forma* LGIA,¹⁴⁰ to maintain consistency with Order Nos. 845 and 845-A. Specifically, LG&E/KU propose revisions to update the definition of "Generating Facility" to match the requirements in Order Nos. 845 and 845-A, as well as to insert the *pro forma* definition for "Stand Alone Network Upgrades," with some deviation to clarify the role of the ITO and transmission owner.¹⁴¹

74. Additionally, LG&E/KU propose revisions to the interconnection request for a large generating facility contained in Appendix 1 to their LGIP in order to accommodate interconnection requests for surplus interconnection service and provisional interconnection service.¹⁴² Appendix 1 to LG&E/KU's LGIP currently allows an interconnection customer to select whether its interconnection request is for a new large generating facility or an increase in the generating capacity or material modification of an existing generating facility.¹⁴³ LG&E/KU propose to add options for the interconnection customer to select whether its interconnection request is for provisional interconnection service or surplus interconnection service. LG&E/KU also propose language requiring that, for surplus interconnection service, the interconnection customer include proof that the existing interconnection customer and surplus interconnection customer have entered into a surplus arrangement and include the system impact study performed for the existing generation facility with its application or indicate that such a study is not available.¹⁴⁴

75. Finally, LG&E/KU propose Tariff revisions to correct internal section references to accommodate the addition of surplus interconnection service as section 3.3 of their LGIP. Specifically, LG&E/KU's additions and modifications affect the following sections of their LGIP: 3.4 (formerly designated as 3.3), 3.4.1 (formerly designated as

¹⁴⁰ See *E.ON U.S. LLC*, 133 FERC ¶ 61,165, at P 15 (2010) (citing *Sw. Power Pool, Inc.*, 128 FERC ¶ 61,191, at P 21 (2009)).

¹⁴¹ LG&E/KU, OATT, attach. M, app. 9 (Interim Large Generator Interconnection Agreement), art. 1.

¹⁴² Filing at 5.

¹⁴³ LG&E/KU, OATT, attach. M, app. 1 (Interconnection Request for a Large Generating Facility).

¹⁴⁴ *Id.*

3.3.1), 3.4.2 (formerly designated as 3.3.2), 3.4.3 (formerly designated as 3.3.3), 3.4.4 (formerly designated as 3.3.4), 3.5 (formerly designated as 3.4), 3.6 (formerly designated as 3.5), and 3.7 (formerly designated as 3.6).

2. Commission Determination

76. We find LG&E/KU's proposal to update the definition of "Generating Facility" and add the definition of "Stand Alone Network Upgrades" in their Interim LGIA to be consistent with or superior to the requirements of Order Nos. 845 and 845-A because they use the Commission's *pro forma* definitions, with deviation only to reflect the delegation of responsibilities between the ITO and LG&E/KU as the transmission owner consistent with Attachment P of the Tariff, and will bring additional clarity and precision to LG&E/KU's Interim LGIA. However, because the originally proposed and accepted LG&E/KU's Interim LGIA is based on the *pro forma* LGIA,¹⁴⁵ we direct LG&E/KU to file, within 60 days of the date of this order, a further compliance filing that updates the Interim LGIA to incorporate all changes to the *pro forma* LGIA that were required by Order Nos. 845 and 845-A, such as revisions to articles 5.1, 5.1.3, 5.1.4, and 5.2(12).

77. Regarding the revisions to Appendix 1 of the LGIP to include provisions relating to provisional interconnection service and surplus interconnection service, we find these revisions consistent with or superior to the changes adopted in Order Nos. 845 and 845-A because they facilitate the interconnection customer's ability to request provisional interconnection service and surplus interconnection service and bring additional clarity and precision to LG&E/KU's interconnection process. However, we direct LG&E/KU in their compliance filing to correct duplicative text in Appendix 1 to the LGIP and delete one of the two proposed sentences that read: "For Surplus Service also include (1) proof that Existing LGIA Customer and Surplus Interconnection Customer have entered into a Surplus arrangement and (2) the System Impact Study performed for the Existing Generation Facility with its application or indication that such study is not available."¹⁴⁶

78. We find that the proposed revisions and modifications relating to section references, as proposed by LG&E/KU in their LGIP, conform to the requirements of Order Nos. 845 and 845-A.

¹⁴⁵ LG&E/KU September 22, 2010 Filing, Docket No. ER10-2820-000, at 3, 5 (2010); *see also E.ON U.S. LLC*, 133 FERC ¶ 61,165 (2010).

¹⁴⁶ LG&E/KU, OATT, attach. M, app. 1 (Interconnection Request for a Large Generating Facility).

The Commission orders:

(A) LG&E/KU'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) LG&E/KU are 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)

Kimberly D. Bose,
Secretary.