

169 FERC ¶ 61,218  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

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

Duke Energy Carolinas, LLC  
Duke Energy Progress, LLC  
Duke Energy Florida, LLC

Docket No. ER19-1507-004

ORDER ON COMPLIANCE

(Issued December 19, 2019)

1. On April 2, 2019, as amended on April 24, May 20, July 12, and July 24, 2019, Duke Energy Carolinas, LLC, Duke Energy Progress, LLC, and Duke Energy Florida, LLC (collectively, Duke Energy) submitted proposed revisions to Duke Energy's Joint Open Access Transmission Tariff (Tariff) to comply with the requirements of Order Nos. 845 and 845-A,<sup>1</sup> which amended the Commission's *pro forma* Large Generator Interconnection Agreement (LGIA) and *pro forma* Large Generator Interconnection Procedures (LGIP) (Compliance Filing).<sup>2</sup> As discussed below, we find that Duke Energy's Compliance Filing partially complies with the requirements of Order Nos. 845 and 845-A. Accordingly, we accept Duke Energy's Compliance Filing, effective May 22, 2019, and direct Duke Energy to submit a further compliance filing within 60 days of the date of this order.

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<sup>1</sup> *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).

<sup>2</sup> 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.

## 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 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.<sup>3</sup> 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<sup>4</sup> and stand alone network upgrades<sup>5</sup> only in instances when the transmission provider cannot meet the dates proposed by the interconnection customer;<sup>6</sup> and (2) required that transmission

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

<sup>4</sup> 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).

<sup>5</sup> 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.*

<sup>6</sup> Order No. 845, 163 FERC ¶ 61,043 at P 85.

providers establish interconnection dispute resolution procedures that allow a disputing party unilaterally to seek non-binding dispute resolution.<sup>7</sup>

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;<sup>8</sup> (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.<sup>9</sup>

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<sup>10</sup> 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.<sup>11</sup>

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<sup>7</sup> *Id.* P 3.

<sup>8</sup> 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).

<sup>9</sup> Order No. 845, 163 FERC ¶ 61,043 at P 4.

<sup>10</sup> 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.

<sup>11</sup> *Id.* P 5.

## II. Duke Energy's Compliance Filing

6. On April 2, 2019, as amended on April 24, May 20, July 12, and July 24, 2019, Duke Energy submitted its Compliance Filing with proposed revisions to Attachment J to its Tariff, including revisions to its LGIP and *pro forma* LGIA, to comply with the requirements of Order Nos. 845 and 845-A.<sup>12</sup> Duke Energy requests that the Commission make the proposed Tariff revisions in its Compliance Filing effective on May 22, 2019, consistent with the effective date established in Order No. 845-A.

## III. Notice and Responsive Pleadings

7. Notice of the April 2, 2019 filing (April 2 Filing) was published in the *Federal Register*, 84 Fed. Reg. 14,110 (2019), with interventions and protests due on or before April 23, 2019.

8. Notice of the April 24, 2019 filing (April 24 Filing) was published in the *Federal Register*, 84 Fed. Reg. 18,275 (2019), with interventions and protests due on or before May 15, 2019.

9. Notice of the May 20, 2019 filing (May 20 Filing) was published in the *Federal Register*, 84 Fed. Reg. 24,129 (2019), with interventions and protests due on or before June 10, 2019.

10. On June 13, 2019, Commission staff issued a deficiency letter that requested additional clarification regarding Duke Energy's proposed procedure for allowing surplus interconnection service (Deficiency Letter). On July 12, 2019, Duke Energy filed its Deficiency Letter response (Deficiency Letter Response). Notice of the Deficiency Letter Response was published in the *Federal Register*, 84 Fed. Reg. 34,883 (2019), with interventions and protests due on or before August 2, 2019.

11. Notice of the July 24, 2019 filing (July 24 Filing) was published in the *Federal Register*, 84 Fed. Reg. 36,912 (2019), with interventions and protests due on or before August 14, 2019.

12. North Carolina Electric Membership Corporation (NCEMC), Reedy Creek Improvement District, and Seminole Electric Cooperative, Inc. filed timely motions to intervene. NCEMC also filed comments requesting ministerial changes to certain

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<sup>12</sup> Although Duke Energy proposed Tariff revisions to comply with the requirements of Order Nos. 845 and 845-A, we note that Duke Energy, for the most part, did not either explain, in its transmittal letters, how it complies with each of the requirements of Order Nos. 845 and 845-A, or identify the proposed Tariff revisions that comply with each of the requirements of Order Nos. 845 and 845-A.

proposed Tariff revisions. In its April 24 Filing, Duke Energy made those ministerial changes.<sup>13</sup>

#### **IV. Discussion**

##### **A. Procedural Matters**

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

##### **B. Substantive Matters**

14. As discussed below, we find that Duke Energy's Compliance Filing partially complies with the requirements of Order Nos. 845 and 845-A. Accordingly, we accept Duke Energy's Compliance Filing, effective May 22, 2019, subject to a further compliance filing that must be submitted within 60 days of the date of this order, as discussed below.

#### **1. 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.<sup>14</sup> 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.<sup>15</sup> The Commission stated in Order No. 845 that this reform of the option to build will "benefit

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<sup>13</sup> See *infra* PP 53-54.

<sup>14</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 85-87.

<sup>15</sup> *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 104 FERC ¶ 61,103, at P 353 (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); see also *pro forma* LGIP § 5.1.3.

the interconnection process by providing interconnection customers more control and certainty during the design and construction phases of the interconnection process.”<sup>16</sup>

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;<sup>17</sup> and (2) clarify that the option to build does not apply to stand alone network upgrades on affected systems.<sup>18</sup> 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.<sup>19</sup> 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.<sup>20</sup>

**a. Duke Energy’s Compliance Filing**

17. Duke Energy proposes revisions to its *pro forma* LGIA amending articles 5.1, 5.1.3, 5.1.4, and 5.2(12) to incorporate the *pro forma* LGIA provisions adopted by Order Nos. 845 and 845-A without modification. Duke Energy also adopts the Commission’s revised definition of stand alone network upgrades in the *pro forma* LGIP, in compliance with Order No. 845-A.<sup>21</sup>

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<sup>16</sup> Order No. 845, 163 FERC ¶ 61,043 at P 85.

<sup>17</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 68.

<sup>18</sup> *Id.* P 61.

<sup>19</sup> *Id.* P 75.

<sup>20</sup> *Id.* P 33.

<sup>21</sup> *Id.* P 68; *see also* Duke Energy proposed LGIP § 1 (Definitions), “Stand Alone Network Upgrades,” and Duke Energy *pro forma* LGIA art. 1 (Definitions), “Stand Alone Network Upgrades.”

**b. Commission Determination**

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

**2. Dispute Resolution**

19. 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.<sup>22</sup> 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.<sup>23</sup>

**a. Duke Energy's Compliance Filing**

20. In a new section 13.5.5 in Duke Energy's proposed LGIP, Duke Energy proposes to adopt the Commission's new section 13.5.5 of the *pro forma* LGIP without modification.

**b. Commission Determination**

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

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

22. 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

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<sup>22</sup> Order No. 845, 163 FERC ¶ 61,043 at P 133; *see also pro forma* LGIP § 13.5.5.

<sup>23</sup> Order No. 845, 163 FERC ¶ 61,043 at P 139.

network upgrades and/or costs and timing.<sup>24</sup> The Commission also added new section 3.8 to the *pro forma* LGIP, which requires transmission providers to include, within section 3.8, a method for identifying the contingent facilities that they will provide to the interconnection customer at the conclusion of the system impact study and include in the interconnection customer's generator interconnection agreement.<sup>25</sup> 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.<sup>26</sup> The Commission stated that this transparency will ensure that the method is applied on a non-discriminatory basis.<sup>27</sup> 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.<sup>28</sup>

**a. Duke Energy's Compliance Filing**

23. Duke Energy proposes to add new section 3.8 to its LGIP to provide a method for identifying and listing contingent facilities in the system impact study. The proposed section states that the transmission provider shall identify contingent facilities in the system impact study by reviewing and accounting for: (1) planned network upgrades associated with interconnection customers with higher queue priority; and/or (2) coordination with applicable affected system parties to determine what contingent facilities have been identified through affected system studies; and/or (3) other planned transmission projects unrelated to any interconnection requests. Proposed section 3.8 also explains that any such planned upgrades, contingent facilities or planned transmission projects 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, shall each be identified and listed in the system impact study. The proposed section also states that the transmission provider shall provide a written explanation as to why a facility was identified as a contingent facility and how it relates to the interconnection request. Further, proposed section 3.8 states that the transmission provider shall provide, upon request of the interconnection customer, the estimated interconnection facility and/or network upgrade costs, and estimated in-service

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<sup>24</sup> *Id.* P 218; *see also pro forma* LGIP § 1 (Definitions).

<sup>25</sup> Order No. 845, 163 FERC ¶ 61,043 at P 199.

<sup>26</sup> *Id.*; *see also pro forma* LGIP § 3.8.

<sup>27</sup> Order No. 845, 163 FERC ¶ 61,043 at P 200.

<sup>28</sup> *Id.* P 199; *see also pro forma* LGIP § 3.8.



completion time of each identified contingent facility when this information is readily available and not commercially sensitive.

**b. Commission Determination**

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

25. However, as specified in Order No. 845, transmission providers must include, in section 3.8 of their LGIPs, a method for determining contingent facilities. 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.<sup>29</sup> 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.<sup>30</sup> Duke Energy's proposed Tariff revisions lack the requisite transparency required by Orders No. 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 Duke Energy will use as part of its method to identify contingent facilities.<sup>31</sup> Without this information, an interconnection customer will not understand how Duke Energy will evaluate potential contingent facilities to determine their relationship to an individual interconnection request.<sup>32</sup> Further, including provisions regarding specific thresholds or criteria in Duke Energy's LGIP will ensure Duke Energy's technical screens or analyses will be applied to interconnection requests on a consistent, not unduly discriminatory or preferential basis. Accordingly, we direct

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<sup>29</sup> Order No. 845, 163 FERC ¶ 61,043 at P 199.

<sup>30</sup> *Id.* P 200.

<sup>31</sup> 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.

<sup>32</sup> *See pro forma* LGIP § 3.8 ("The method shall be sufficiently transparent to determine why a specific Contingent Facility was identified").

Duke Energy to file, within 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 the technical screens or analyses it proposes to use to identify these facilities. We also require that Duke Energy include in LGIP section 3.8, 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.

#### 4. Transparency Regarding Study Models and Assumptions

26. In Order No. 845, the Commission revised section 2.3 of the *pro forma* LGIP to require transmission providers to maintain network models and underlying assumptions on either an Open Access Same-Time Information System (OASIS) site or a password-protected website. If the transmission provider posts this information on a password-protected website, a link to the information must be provided on its OASIS site. Revised *pro forma* LGIP section 2.3 also requires that “network models and underlying assumptions reasonably represent those used during the most recent interconnection study and be representative of current system conditions.”<sup>33</sup> 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).<sup>34</sup>

27. 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.<sup>35</sup> 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.<sup>36</sup> 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

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<sup>33</sup> Order No. 845, 163 FERC ¶ 61,043 at P 236.

<sup>34</sup> *Id.*; see also *pro forma* LGIP § 2.3.

<sup>35</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 84 (citing Order No. 845, 163 FERC ¶ 61,043 at P 241).

<sup>36</sup> *Id.* P 85 (citing 18 C.F.R. § 388.113(g)(5)(i) (2019)).

system. Instead, the network model information should reflect the system conditions currently used in interconnection studies.<sup>37</sup>

**a. Duke Energy's Compliance Filing**

28. Duke Energy proposes to revise section 2.3 of its LGIP to incorporate the language adopted by Order Nos. 845 and 845-A without modification.

**b. Commission Determination**

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

**5. Definition of Generating Facility**

30. 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.<sup>38</sup>

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.<sup>39</sup>

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<sup>37</sup> *Id.* P 88.

<sup>38</sup> Order No. 845, 163 FERC ¶ 61,043 at P 275 (additions italicized); *see also pro forma* LGIP § 1.

<sup>39</sup> Order No. 845, 163 FERC ¶ 61,043 at P 275.

a. **Duke Energy’s Compliance Filing**

31. Duke Energy proposes revisions to its LGIP and *pro forma* LGIA to adopt the Commission’s revised definition of “Generating Facility” in the *pro forma* LGIP and *pro forma* LGIA without modification.<sup>40</sup>

b. **Commission Determination**

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

6. **Interconnection Study Deadlines**

33. 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.<sup>41</sup> 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.<sup>42</sup> 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.<sup>43</sup> 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.<sup>44</sup> In Order No. 845-A, the Commission revised

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<sup>40</sup> Duke Energy proposed LGIP § 1, “Generating Facility;” *see also* Duke Energy *pro forma* LGIA art. 1.

<sup>41</sup> Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP §§ 3.5.2 and 3.5.3.

<sup>42</sup> *Id.*

<sup>43</sup> Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP § 3.5.4.

<sup>44</sup> Order No. 845, 163 FERC ¶ 61,043 at P 307.

*pro forma* LGIP section 3.5.3 to clarify that the data reporting and retention requirements begin in the first calendar quarter of 2020.<sup>45</sup>

**a. Duke Energy's Compliance Filing**

34. Duke Energy proposes revisions to its LGIP to add new sections 3.5.2, 3.5.3 and 3.5.4 that incorporate the *pro forma* language of Order Nos. 845 and 845-A. In addition, Duke Energy proposes to revisions to LGIP section 3.5.2.1 to provide for a feasibility study completion deadline of "45 Calendar Days"; LGIP section 3.5.2.2 to provide for a system impact study completion deadline of "90 Calendar Days"; and LGIP section 3.5.2.3 to provide for a facilities study completion deadline of "(1) 90 Calendar Days after receipt by Transmission Provider of the Interconnection Customer's executed Interconnection Facilities Study Agreement if Interconnection Customer requested a +/- 20% cost estimate in such study or (2) 180 Calendar Days after receipt by Transmission Provider of the Interconnection Customer's executed Interconnection Facilities Study Agreement if Interconnection Customer requested a +/- 10% cost estimate in such study."

**b. Commission Determination**

35. We find that Duke Energy's proposed LGIP revisions regarding Duke Energy's study deadline statistics and informational reporting requirements partially comply with the requirements of Order Nos. 845 and 845-A. Duke Energy's proposed revisions adopt *pro forma* LGIP sections 3.5.2, 3.5.3, and 3.5.4 without modification, and replace the bracketed placeholders with deadlines that match, except in one case, applicable interconnection study deadlines already in its Tariff. The one exception is in proposed LGIP section 3.5.2.3(C), which references the number of active, valid interconnection service requests with ongoing but incomplete interconnection facilities studies "more than 180 Calendar Days before the reporting quarter end" but which does not clarify that, consistent with its existing provisions, that the 180 day deadline applies to studies where the interconnection customer requested a +/- 10 percent cost estimate. Accordingly, we direct Duke Energy to file, within 60 days of the date of this order, a further compliance filing to revise section 3.5.2.3(C) of its LGIP to clarify that the 180 day deadline applies to interconnection facilities studies where the interconnection customer requested a +/- 10 percent cost estimate.

**7. Requesting Interconnection Service below Generating Facility Capacity**

36. 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

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<sup>45</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 107.

interconnection service that is lower than the proposed generating facility's capacity,<sup>46</sup> recognizing the need for proper control technologies and flexibility for transmission

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<sup>46</sup> 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.<sup>47</sup>

37. The Commission required, in *pro forma* LGIP revised 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.<sup>48</sup> In addition, *pro forma* LGIP revised 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 *pro forma* LGIP revised section 3.1 that any necessary control technologies and/or protection systems be memorialized in the LGIA.

38. The Commission required, in *pro forma* LGIP revised 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.<sup>49</sup>

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<sup>47</sup> 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.

<sup>48</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 383-84.

<sup>49</sup> *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.*

39. 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.<sup>50</sup>

**a. Duke Energy's Compliance Filing**

40. Duke Energy proposes revisions to its LGIP that largely adopt the Commission's proposed reforms to *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. However, Duke Energy's proposed Tariff revisions do not fully incorporate the *pro forma* LGIP language adopted by Order No. 845.<sup>51</sup> Order No. 845 adopted the following language as the second sentence of the final paragraph in *pro forma* LGIP section 3.1 and Duke Energy omits some of this provision in its 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.<sup>52</sup>

**b. Commission Determination**

41. We find that Duke Energy'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. Duke adopts most of the *pro forma* language without modification. However, as discussed above, Duke Energy's revisions to section 3.1 of its LGIP omit some of the *pro forma* LGIP language required by Order No. 845.<sup>53</sup> Accordingly, we direct Duke Energy to file, within 60 days

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<sup>50</sup> *Id.* P 406; *see also pro forma* LGIP §§ 4.4.1 and 4.4.2.

<sup>51</sup> *See* Order No. 845-A, 166 FERC ¶ 61,137 at P 117.

<sup>52</sup> 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 Duke Energy'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.

<sup>53</sup> *Id.* PP 347, 367, and app. B.



of the date of this order, a further compliance filing that incorporates the *pro forma* revisions to section 3.1 of its LGIP, as required by Order No. 845.

## 8. Provisional Interconnection Service

42. In Order No. 845, the Commission required transmission providers to allow all interconnection customers to request provisional interconnection service.<sup>54</sup> 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.<sup>55</sup> To implement this service, the Commission revised the *pro forma* LGIP and *pro forma* LGIA to add a definition for “Provisional Interconnection Service”<sup>56</sup> and for a “Provisional Large Generator Interconnection Agreement.”<sup>57</sup>

43. In addition, the Commission added *pro forma* LGIA article 5.9.2, which details the terms for provisional interconnection service.<sup>58</sup> 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.<sup>59</sup> The Commission stated that interconnection customers are responsible for the costs for performing these provisional interconnection studies.<sup>60</sup>

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<sup>54</sup> *Id.* P 438.

<sup>55</sup> *Id.* P 441.

<sup>56</sup> *Pro forma* LGIP § 1 (Definitions); *pro forma* LGIA art. 1 (Definitions).

<sup>57</sup> *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.

<sup>58</sup> *Id.* P 438; *see also pro forma* LGIP § 5.9.2.

<sup>59</sup> Order No. 845, 163 FERC ¶ 61,043 at P 448.

<sup>60</sup> *Id.*

a. **Duke Energy's Compliance Filing**

44. Duke Energy proposes revisions to its LGIP and *pro forma* LGIA to adopt without modification the definition of Provisional Interconnection Service that the Commission established for the *pro forma* LGIP and *pro forma* LGIA in Order No. 845.<sup>61</sup> Duke Energy also proposes to add new article 5.9.2 to its *pro forma* LGIA that the Commission established in Order No. 845, which details the terms for Duke Energy's Provisional Interconnection Service. In its *pro forma* LGIA article 5.9.2, Duke Energy also proposes to fill in the bracketed section to state that it will study and update the maximum permissible output of generating facilities taking provisional interconnection service on an annual basis.

b. **Commission Determination**

45. We find that Duke Energy's proposed LGIP and *pro forma* LGIA revisions regarding provisional interconnection service comply with the requirements of Orders No. 845 and 845-A because Duke Energy adopts the Commission's *pro forma* definition of provisional interconnection service, and incorporates article 5.9.2 of the Commission's *pro forma* LGIA without modification except to fill in the bracketed section to state that it will study and update the maximum permissible output of generating facilities taking provisional interconnection service on an annual basis.<sup>62</sup>

9. **Surplus Interconnection Service**

46. 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.<sup>63</sup> Surplus interconnection service enables a new interconnection customer to utilize the unused portion of an existing interconnection customer's interconnection service within specific

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<sup>61</sup> Duke Energy proposed LGIP § 1 (Definitions), "Provisional Interconnection Service;" *see also* Duke Energy *pro forma* LGIA art. 1 (Definitions), "Provisional Interconnection Service."

<sup>62</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 438, 448.

<sup>63</sup> *Id.* P 467; *see pro forma* LGIP § 1 (Definitions); *pro forma* LGIP art. 1 (Definitions).

parameters.<sup>64</sup> 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.<sup>65</sup> 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.<sup>66</sup> 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.<sup>67</sup> 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.<sup>68</sup> When the 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.<sup>69</sup>

**a. Duke Energy's Compliance Filing**

47. Duke Energy proposes revisions to its LGIP and *pro forma* LGIA that add a definition for surplus interconnection service to section 1 of its LGIP and article 1 of the *pro forma* LGIA. Duke Energy proposes Tariff revisions in response to the Commission's *pro forma* LGIP and *pro forma* LGIA revisions for surplus interconnection service, as required by Order Nos. 845 and 845-A.

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<sup>64</sup> Order No. 845, 163 FERC ¶ 61,043 at P 467; Order No. 845-A, 166 FERC ¶ 61,137 at P 119.

<sup>65</sup> Order No. 845, 163 FERC ¶ 61,043 at P 467; *see pro forma* LGIP §§ 3.3 and 3.3.1.

<sup>66</sup> Order No. 845, 163 FERC ¶ 61,043 at P 483, *see pro forma* LGIP § 3.3.

<sup>67</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 455, 467.

<sup>68</sup> *Id.* P 481.

<sup>69</sup> *Id.* P 499.

48. In its Deficiency Letter Response, Duke Energy proposes a new section 3.3.2 (Process for Surplus Interconnection Service Requests) in its LGIP, which describes an expedited process for interconnection customers to use surplus interconnection service.<sup>70</sup>

49. Duke Energy proposes in LGIP section 3.3.2(A) that an existing interconnection customer, or an affiliate, may request surplus interconnection service by submitting a complete request in the form of Appendix 1 to its LGIP and providing a deposit of \$10,000. This provision also provides that an entity other than the existing interconnection customer or an affiliate may make a request for surplus interconnection service but must include concurrence from the existing large generator interconnection customer that they are willing to assign surplus interconnection service to the entity. Duke Energy also proposes in LGIP section 3.3.2.B that a surplus interconnection request will not be considered to be a valid request until all items required by section 3.3.2.A have been received and deemed adequate by the transmission provider. If an Interconnection Request fails to meet the requirements set forth in Section 3.3.2.A, the transmission provider shall notify the surplus interconnection customer within five business days of receipt of the initial surplus interconnection request of the reasons for such failure and that the surplus interconnection request does not constitute a valid request. Duke Energy also proposes that the transmission provider shall acknowledge receipt of the surplus interconnection service request within five business days of the receipt of the request and tender a surplus interconnection study agreement to the surplus interconnection customer within 30 business days of the receipt of a complete request.<sup>71</sup>

50. Duke Energy proposes that a surplus interconnection customer shall execute a surplus interconnection study agreement and provide a study deposit of \$50,000,<sup>72</sup> with the deposit applied toward any interconnection studies pursuant to the surplus interconnection service request.<sup>73</sup> Duke Energy proposes that the transmission provider will then perform the surplus interconnection study “by performing a System Impact Study phase within 60 Business Days and, if necessary, a Facilities Study phase within an additional 90 Business Days.”<sup>74</sup> Duke Energy further proposes that the transmission provider will provide the results of the surplus interconnection study to the surplus interconnection

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<sup>70</sup> Duke Energy proposed LGIP § 3.3.2.

<sup>71</sup> Duke Energy proposed LGIP § 3.3.2.C-D.

<sup>72</sup> *Id.* § 3.3.2.E.

<sup>73</sup> *Id.* § 3.3.2.A.

<sup>74</sup> *Id.* § 3.3.2.F.

customer and, if applicable, to the original interconnection customer.<sup>75</sup> Finally, Duke Energy proposes that within 10 business days of delivering the study results, the transmission provider will schedule a customer meeting to discuss the results of the studies with the applicable interconnection customer or customers.<sup>76</sup>

51. Duke Energy's proposed Tariff language states that within 30 days of the customer meeting, the transmission provider will prepare the amendments of the surplus interconnection agreement, which will take the form of an LGIA, and will deliver them to the applicable interconnection customer or customers.<sup>77</sup> Duke Energy proposes that a 60-day negotiation period will occur to finalize certain timelines and financial aspects, but notes that in the event the negotiations fail to result in an agreement, the surplus interconnection customer may direct the transmission provider to file the agreement unexecuted with the Commission.<sup>78</sup>

52. Duke Energy proposes several parameters that govern the use of surplus interconnection service. First, Duke Energy proposes that surplus interconnection service cannot be offered unless the original large generator interconnection customer's interconnection facilities, network upgrades, and any identified contingent network upgrades identified in the original LGIA are in service.<sup>79</sup> Second, Duke Energy proposes that surplus service cannot be granted to the surplus interconnection customer if the surplus interconnection study indicates that additional network upgrades would be needed.<sup>80</sup> Finally, Duke Energy proposes that requests for surplus interconnection service cannot exceed the original interconnected MW amount, and must be for either the same service (ERIS or NRIS) or, if the original LGIA was for NRIS, then the surplus interconnection customer could request the lower level ERIS service if desired.<sup>81</sup>

#### **b. NCEMC Comments and Duke Energy Response**

53. NCEMC filed comments stating that Duke Energy's proposed amendments to section 2 of Appendix 1 to its LGIP use the phrases "Surplus Interconnection Service"

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<sup>75</sup> *Id.* § 3.3.2.G.

<sup>76</sup> *Id.* § 3.3.2.H.

<sup>77</sup> *Id.* § 3.3.2.I.

<sup>78</sup> *Id.* § 3.3.2.J.

<sup>79</sup> *Id.* § 3.3.2.K.

<sup>80</sup> *Id.*

<sup>81</sup> Duke Energy proposed LGIP § 3.3.2.L.

and “Surplus Service.”<sup>82</sup> NCEMC notes that “Surplus Interconnection Service” is a defined term in the Tariff, while “Surplus Service” is not. NCEMC requests that the Commission require Duke Energy to clarify that “Surplus Service” should refer to “Surplus Interconnection Service” and to revise its Tariff accordingly.<sup>83</sup>

54. In its April 24 Filing, Duke Energy made the ministerial Tariff changes requested by NCEMC.<sup>84</sup>

**c. Commission Determination**

55. We find that Duke Energy’s proposed Tariff revisions regarding surplus interconnection service partially comply with the requirements of Order Nos. 845 and 845-A. Duke Energy adopts the *pro forma* LGIP and *pro forma* LGIA revisions for surplus interconnection service, as required by Order Nos. 845 and 845-A, without modification. Duke Energy also proposes a procedure by which it will evaluate surplus interconnection service requests. However, Duke Energy does not explicitly state that surplus interconnection service requests will be processed outside the non-surplus interconnection queue, as required by Order No. 845.<sup>85</sup> Accordingly, we direct Duke Energy to file, within 60 days of the date of this order, a further compliance filing to revise its LGIP to explicitly state that surplus interconnection requests will be processed outside of the non-surplus interconnection queue.

**10. Material Modifications and Incorporation of Advanced Technologies**

56. 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,<sup>86</sup> without risking the loss of its queue position. The Commission required transmission providers to develop and include in their LGIPs a

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<sup>82</sup> NCEMC Comments at 3.

<sup>83</sup> *Id.*

<sup>84</sup> April 24 Filing at 3.

<sup>85</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 467, 486-488.

<sup>86</sup> 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

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.<sup>87</sup> 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.<sup>88</sup>

57. 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.<sup>89</sup> 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.<sup>90</sup>

58. 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.<sup>91</sup> 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.<sup>92</sup> In addition, the Commission required that the

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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.

<sup>87</sup> *Id.* P 518.

<sup>88</sup> *Id.*; see also *pro forma* LGIP § 4.4.6.

<sup>89</sup> Order No. 845, 163 FERC ¶ 61,043 at P 519.

<sup>90</sup> *Id.*

<sup>91</sup> *Id.*; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

<sup>92</sup> Order No. 845, 163 FERC ¶ 61,043 at P 521.

technological change procedure explain how the transmission provider will evaluate the technological advancement request to determine whether it is a material modification.<sup>93</sup>

59. 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.<sup>94</sup> The Commission also found that, if the transmission provider determines that additional studies are necessary to evaluate whether a technological advancement is a material modification, the interconnection customer must tender a deposit, and the transmission provider must specify the amount of the deposit in the transmission provider's technological change procedure.<sup>95</sup> 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.<sup>96</sup>

60. 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

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<sup>93</sup> *Id.*

<sup>94</sup> *Id.* P 535.

<sup>95</sup> *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.*

<sup>96</sup> *Id.* P 522.



proposed technological change materially impacts the timing and costs of lower-queued interconnection customers.<sup>97</sup>

**a. Duke Energy's Compliance Filing**

61. Duke Energy proposes revisions to its LGIP and its *pro forma* LGIA that incorporate a new section 4.4.6<sup>98</sup> to the LGIP and add a definition of permissible technological advancement to section 1 of its LGIP. The definition states that permissible technological advancement “shall mean a new, upgraded, updated or modified technology that an Interconnection Customer intends to utilize in the design, construction or operation of generation or transmission facilities such as an updated type of turbine, inverter, plant supervisory controls or other advancements, provided however that no such advancement may (a) include a change in the generation technology or fuel type and (b) constitute a Material Modification.”

62. Duke Energy proposes to include a new section 4.4.6 in its LGIP that describes the procedure by which an interconnection customer may submit a written request, prior to the return of the executed interconnection facilities study agreement, to make a technological change to its generating facility. Duke Energy's proposed language in section 4.4.6 states that such written requests must include a description of the proposed technological change and must provide details necessary to permit the transmission provider to evaluate whether the proposed change is a material modification. Duke Energy's proposed language in section 4.4.6 also requires that an interconnection customer identify any changes to either the interconnection request or the assumptions used in conducting the interconnection system impact study that will occur as a result of the proposed technological change. Duke Energy's proposed tariff language explains that “if the proposed technological change will not materially change any of the information previously provided, the proposed change shall not be deemed to be a Material Modification and Transmission Provider will so inform the Interconnection Customer.”<sup>99</sup>

63. Duke Energy's proposed LGIP section 4.4.6 further states that if the proposed change does materially change any of the information previously provided as discussed above, then the transmission provider will notify the interconnection customer that an evaluation is necessary to determine whether the proposed change is a material modification and will conduct the evaluation to determine whether the proposed change will materially impact the timing and costs of lower-queued customers. Duke Energy's

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<sup>97</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

<sup>98</sup> As discussed below, we direct Duke Energy to correct its section headings because Duke Energy's Tariff, as proposed, includes two LGIP sections numbered 4.4.6.

<sup>99</sup> Duke Energy proposed LGIP § 4.4.6.

proposed LGIP section 4.4.6 concludes by stating that the interconnection customer will provide the transmission provider with a study deposit of \$10,000 within five business days after notification that such an evaluation is required and that the transmission provider shall complete such evaluation and notify the interconnection customer of the results within 30 calendar days after receipt of the required information described above and the study deposit from the interconnection customer.

**b. Commission Determination**

64. We find that Duke Energy's proposed LGIP revisions to incorporate a definition of a permissible technological advancement and a technological change procedure partially comply with the requirements of Order Nos. 845 and 845-A. Specifically, we find that Duke Energy's proposed definition of a permissible technological advancement meets the Commission's requirement to provide a category of technological change that does not constitute a material modification. However, although Duke Energy established a procedure by which to evaluate a technological change proposed by an interconnection customer, we find that Duke Energy's proposed LGIP section 4.4.6 does not include an explanation of the studies that Duke Energy will conduct to determine whether a proposed technological change will be deemed to be a material modification.

65. Order No. 845 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.<sup>100</sup> Duke Energy's proposed language relies on whether the proposed technological change will "materially change" any of the information previously provided as the sole standard by which Duke Energy will assess whether the proposed technological change may require further evaluation to determine if the change constitutes a Material Modification.<sup>101</sup> However, Duke Energy does not define or otherwise explain the term "materially change." Accordingly, we direct Duke Energy to file, within 60 days of the date of this order, a further compliance filing to provide an explanation for the term "materially change."

66. Further, if Duke Energy determines that an interconnection customer's technological advancement request does "materially change" the information previously provided, Duke Energy's proposed LGIP revisions do not explain how Duke Energy will evaluate the technological advancement request to determine whether it is a material modification. Accordingly, we direct Duke Energy to file, within 60 days of the date of

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<sup>100</sup> Order No. 845, 163 FERC ¶ 61,043 at P 521.

<sup>101</sup> Duke Energy proposed LGIP § 4.4.6: "If the proposed technological change will not materially change any of the information previously provided as discussed above, the proposed change shall not be deemed to be a Material Modification and Transmission Provider will so inform the Interconnection Customer."

this order, a further compliance filing revising its LGIP to provide a more detailed explanation of the studies that Duke Energy will conduct to determine whether the technological advancement request will result in a material modification.<sup>102</sup>

67. In addition, because Duke Energy'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.<sup>103</sup>

68. Further, with regard to the deadline for completion of a technological advancement request, Order No. 845 provides that the determination of whether a change is a material modification must be made within 30 days of the initial request.<sup>104</sup> However, Duke's proposal provides that this determination will be made within 30 days of receipt of the written request and study deposit. Accordingly, we direct Duke to file, within 60 days of the date of this order, a further compliance filing that revises its proposed technological change procedure to provide that Duke will determine whether or not a technological advancement is a material modification within 30 calendar days of receipt of the initial request.

69. Finally, we note that Duke Energy's LGIP, as proposed and as updated in this filing, includes two sections numbered 4.4.6. Accordingly, we direct Duke Energy to submit, within 60 days of the date of this order, a further compliance filing to renumber the first instance of proposed LGIP section 4.4.6 as 4.4.4 instead.

The Commission orders:

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

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<sup>102</sup> Order No. 845, 163 FERC ¶ 61,043 at P 521.

<sup>103</sup> *Id.* P 522.

<sup>104</sup> *Id.* P 535; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

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

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.