

169 FERC ¶ 61,226  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

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

PJM Interconnection, L.L.C.

Docket No. ER19-1958-000

ORDER ON COMPLIANCE FILING

(Issued December 19, 2019)

1. On May 22, 2019, PJM Interconnection, L.L.C. (PJM) submitted proposed revisions to its Open Access Transmission Tariff (Tariff) in compliance 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).<sup>2</sup> As discussed below, we find that PJM's filing partially complies with the requirements of Order Nos. 845 and 845-A. Accordingly, we accept PJM's compliance filing in part, effective April 1, 2020, and reject it in part. We direct PJM to submit a further compliance filing within 60 days of the date of this order.

**I. Background**

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

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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.

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 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

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<sup>3</sup> Order No. 845, 163 FERC ¶ 61,043 at 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.

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

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>

## II. PJM’s Compliance Filing

6. On May 22, 2019, PJM submitted its Order No. 845 compliance filing. PJM proposes to revise its interconnection processes and *pro forma* service agreements to comply with the revisions required pursuant to Order No. 845 and Order No. 845-A, “to the extent feasible.”<sup>12</sup> PJM states that its proposed revisions build upon its existing

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<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.” Order No. 845, 163 FERC ¶ 61,043 at P 459.

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

<sup>12</sup> PJM Interconnection, L.L.C. May 22, 2019 Compliance Filing at 1-2 (Filing).

interconnection procedures and agreements, which already contain the framework for many of the Order No. 845 reforms.<sup>13</sup>

7. PJM states that, while all of its proposed revisions are in-line with the intent of the reforms in Order No. 845, because of its previously-accepted interconnection process variations that the Commission granted under Order No. 2003, PJM must seek independent entity variations in two primary areas to comply with the Final Rule: (1) utilization of surplus interconnection service; and (2) interconnection study metrics reporting.<sup>14</sup> The details of each of these proposed variations are discussed below.

8. PJM seeks an effective date for its compliance filing of April 1, 2020, to coincide with the beginning of its next interconnection queue.<sup>15</sup> PJM also proposes that its proposed changes be applicable only to interconnection customers entering the queue on or after April 1, 2020.<sup>16</sup>

### **III. Notice and Responsive Pleadings**

9. Notice of PJM's compliance filing was published in the *Federal Register*, 84 Fed. Reg. 25,251 (2019), with interventions and protests due on or before June 12, 2019. On June 7, 2019, the comment period was extended through June 26, 2019.<sup>17</sup>

10. The following entities filed timely motions to intervene: Exelon Corporation; Dominion Energy Services, Inc.; Calpine Corporation; NRG Power Marketing LLC; Avangrid Renewables, LLC; Energy Storage Association; American Municipal Power, Inc.; EDP Renewables North America LLC; Electric Power Supply Association; North Carolina Electric Membership Corporation; Leeward Renewable Energy Development, LLC, EDF Renewables, Inc.; Enel Green Power North America, Inc.; Renewable Energy Systems Americas, Inc.; E.ON Climate & Renewables North America, LLC; American

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<sup>13</sup> PJM's *pro forma* interconnection agreements are: the Interconnection Service Agreement, in Tariff attach. O; the Interconnection Construction Service Agreement (ICSA), in Tariff attach. P; and the Upgrade Construction Service Agreement (Upgrade CSA), in Tariff attach. GG.

<sup>14</sup> Filing at 2.

<sup>15</sup> *Id.* at 49.

<sup>16</sup> *Id.* at 50.

<sup>17</sup> Notice Granting Extension of Time, Docket Nos. ER19-1949-000, et al. (June 7, 2019).

Electric Power Service Company (AEPSC); Lendlease Energy Development LLC (Lendlease); and Clean Energy Entities.<sup>18</sup>

11. On June 11, 2019, AEPSC filed a “Requests for Clarification, Motions to Intervene, Comments, and Protest.”<sup>19</sup> On June 13, 2019, Sandhills Energy, LLC (Sandhills) filed comments. On June 26, 2019, Clean Energy Entities filed comments, Lendlease filed a protest, and PJM Generation Developers filed a protest.<sup>20</sup> On July 11, 2019, PJM filed an answer.

#### **IV. Discussion**

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

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

13. Rule 213(a)(2) of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2019), prohibits an answer to a protest. We accept PJM’s answer because it has provided information that assisted us in our decision-making process.

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

14. As discussed below, we find that PJM’s filing partially complies with the requirements of Order Nos. 845 and 845-A. Accordingly, we accept PJM’s compliance filing in part, effective April 1, 2020, and reject it in part, as discussed below. We direct PJM to submit a further compliance filing within 60 days of the date of this order.

##### **1. Proposed Variations**

15. As discussed further below, PJM has requested certain variations from the Commission’s requirements in Order Nos. 845 and 845-A. The Commission explained in Order No. 845 that such variations would be reviewed under the same standard allowed

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<sup>18</sup> Clean Energy Entities include the American Wind Energy Association, the Solar Energy Industries Association, and the Solar Council.

<sup>19</sup> AEPSC filed its comments in this docket as well as Docket Nos. EL19-18-002, ER19-1922-000, and ER19-603-002. Comments regarding those filings were addressed in the order in that proceeding. *See PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,112 (2019).

<sup>20</sup> PJM Generation Developers include EDF Renewables, Inc., E.ON Climate & Renewables North America, LLC and Enel Green Power North America, Inc.

by Order No. 2003. In Order No. 2003, the Commission permitted Regional Transmission Organizations/Independent System Operators (RTOs/ISOs) to seek “independent entity variations” for pricing and non-pricing provisions, and that RTOs/ISOs “shall have greater flexibility to customize [their] interconnection procedures and agreement to fit regional needs.”<sup>21</sup> The Commission stated that this approach recognizes that an RTO/ISO is less likely to act in an unduly discriminatory manner than a transmission provider that is a market participant.<sup>22</sup> The Commission has granted independent entity variations from rulemakings where an RTO/ISO demonstrates that the proposed variation: (1) is just and reasonable, and not unduly discriminatory or preferential; and (2) accomplishes the purposes of the final rule.<sup>23</sup> It is not a sufficient justification to state that a variation conforms to current RTO/ISO practices or to the RTO’s/ISO’s tariff definitions and terminology.<sup>24</sup> Even if the transmission provider is an RTO/ISO, it must justify its variations in light of the Commission’s *pro forma* LGIP and/or *pro forma* LGIA.<sup>25</sup> We will evaluate PJM’s proposed variations from the requirements of Order Nos. 845 and 845-A accordingly.

## 2. Interconnection Customer’s Option to Build

16. In Order No. 845, the Commission revised articles 5.1, 5.1.3, and 5.1.4 of the *pro forma* LGIA to allow interconnection customers to unilaterally exercise the option to build for stand alone network upgrades and the transmission provider’s interconnection facilities, regardless of whether the transmission provider can complete construction of such facilities by the interconnection customer’s proposed in-service date, initial

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<sup>21</sup> *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 104 FERC ¶ 61,103, at P 826 (2003), *order on reh’g*, Order No. 2003-A, 106 FERC ¶ 61,220, *order on reh’g*, Order No. 2003-B, 109 FERC ¶ 61,287 (2004), *order on reh’g*, Order No. 2003-C, 111 FERC ¶ 61,401 (2005), *aff’d sub nom. Nat’l Ass’n of Regulatory Util. Comm’rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007), *cert. denied*, 552 U.S. 1230 (2008).

<sup>22</sup> Order No. 2003, 104 FERC ¶ 61,103 at P 827.

<sup>23</sup> *See, e.g., ISO New England, Inc.*, 164 FERC ¶ 61,222, at P 9 (2018) (citing Order No. 2003, 104 FERC ¶ 61,103 at PP 26, 827; *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,247, at P 20 (2016); *California Indep. Sys. Operator Corp.*, 140 FERC ¶ 61,070, at P 44 (2012)).

<sup>24</sup> *Midwest Indep. Transmission Sys. Operator, Inc.*, 139 FERC ¶ 61,219, at P 9 (2012).

<sup>25</sup> *See PJM Interconnection L.L.C.*, 108 FERC ¶ 61,025, at P 16 (2004) (order accepting PJM’s Order No. 2003 compliance filing).

synchronization date, or commercial operation date.<sup>26</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>27</sup> 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."<sup>28</sup>

17. In Order No. 845-A, the Commission granted rehearing and clarification of certain aspects of the revised option to build. Specifically, the Commission revised the definition of stand alone network upgrade in the *pro forma* LGIP and *pro forma* LGIA to: (1) state that, when there is a disagreement, the transmission provider must provide the interconnection customer a written technical explanation outlining why the transmission provider does not consider a specific network upgrade to be a stand alone network upgrade;<sup>29</sup> and (2) clarify that the option to build does not apply to stand alone network upgrades on affected systems.<sup>30</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>31</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>32</sup>

**a. PJM's Compliance Filing**

18. PJM states that the option to build provisions included in its *pro forma* ICSA vary from the corresponding provisions in the Commission's *pro forma* LGIA.<sup>33</sup> PJM states that an interconnection customer may currently exercise the option to build even if the customer and transmission owner cannot agree on the ICSA's terms. Additionally, PJM

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

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

<sup>28</sup> Order No. 845, 163 FERC ¶ 61,043 at P 85.

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

<sup>30</sup> *Id.* P 61.

<sup>31</sup> *Id.* P 75.

<sup>32</sup> *Id.* P 33.

<sup>33</sup> Filing at 5.

states that it uses different terms than those used in the *pro forma* LGIA. PJM uses “Direct Connection Network Upgrades” in lieu of “Stand Alone Network Upgrades” and “Local Upgrades” in lieu of “Distribution Upgrades,” both of which refer to certain upgrades that do not affect the day-to-day operation of the transmission system.<sup>34</sup> PJM explains that, under its current option to build, the interconnection customer may use the option to build for any transmission owner facilities, including Direct Connection or Non-Direct Connection upgrades, regardless of whether those transmission owner facilities impact the transmission system.<sup>35</sup>

19. PJM proposes several revisions to its option to build provisions to comply with the requirements of Order No. 845 and 845-A. First, PJM proposes to modify the term “Direct Connection Network Upgrades” to: (1) clarify that the option to build does not apply to Direct Connection Network Upgrades on an affected system; (2) clarify that PJM and the interconnection customer must agree on what constitutes a Direct Connection Network Upgrade; (3) require that Schedule D of the ICSA will identify the Direct Connection Network Upgrades; and (4) provide that when there is a disagreement as to whether a particular network upgrade is a Direct Connection Network Upgrade, PJM must provide the interconnection customer with a written explanation of its determination that details the technical reasons why a network upgrade is not a Direct Connection Network Upgrade.<sup>36</sup> PJM also proposes to include in *pro forma* ICSA, Appendix 2, section 3.2.3.1, and *pro forma* Upgrade CSA, Appendix III, section 6.2.1 the requirement that, if PJM and the interconnection customer disagree as to what constitutes a Direct Connection Network Upgrade, PJM must provide the interconnection customer a written technical explanation outlining why it does not consider the upgrade to be a Direct Connection Network Upgrade.<sup>37</sup> PJM also proposes revisions to the same

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<sup>34</sup> *Id.* at 6.

<sup>35</sup> *Id.* at 5-6. See PJM, Intra-PJM Tariffs, OATT, attachment P, app. 2, Option to Build (0.0.0) § 3.2.3.1 (“[T]he Interconnection Customer shall have the right, but not the obligation (‘Option to Build’), to design, procure, construct and install all or any portion of the Transmission Owner Interconnection Facilities.”); and § 3.2.3.1 (“To the extent that the Interconnection Customer utilizes the Option to Build for design, procurement, construction and/or installation of (a) any Transmission Owner Interconnection Facilities that are Local Upgrades or Network Upgrades.”); and PJM, Intra-PJM Tariffs, OATT, Definitions L-M-N (20.0.1) (defining Local Upgrades as “Direct Connection Local Upgrades,” which have an impact on the transmission system and “Non-Direct Connection Local Upgrades,” which do not, while defining Network Upgrades in a similar manner).

<sup>36</sup> Filing at 8.

<sup>37</sup> *Id.* at 8-9. PJM states that these changes to the *pro forma* ICSA and Upgrade



provisions to allow the interconnection customer to elect the option to build regardless of whether the interconnected transmission owner can meet the interconnection customer's proposed construction dates.

20. PJM also proposes revisions to change the facilities for which an interconnection customer can exercise the option to build. PJM proposes to limit the option to build to Transmission Owner Interconnection Facilities that are Transmission Owner Attachment Facilities and Direct Connection Network Upgrades.<sup>38</sup> The proposed revisions provide that "Except for Direct Connection Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option."<sup>39</sup> PJM argues that this revision is consistent with Order Nos. 2003 and 845, since both orders limit the option to build to stand alone network upgrades. Although PJM's existing option to build provisions allow interconnection customers the right to elect the option to build for more than just the equivalent of stand alone network upgrades, PJM believes that it is now necessary to conform its provision to the *pro forma* LGIA.<sup>40</sup> PJM explains that, before Order No. 845, the option to build was viewed as a "last resort," but with the more expansive application of the option to build in Order No. 845, it is no longer a last resort and likely will occur more often and have more impact on PJM transmission owners and PJM.<sup>41</sup>

21. PJM also proposes to incorporate *pro forma* LGIA, article 5.2, *in toto*, into its option to build provisions as a new subsection 3.2.3.2(a) of Appendix 2 to the ICSA and as new subsection 6.2.2(a) of Appendix III to the Upgrade CSA.<sup>42</sup> PJM states that its existing option to build provisions do not include *pro forma* LGIA article 5.2. Instead, it included other provisions in section 3.2.3.2 of Appendix 2 to the ICSA specific to the construction of the option to build facilities, such as obtaining all necessary permits and

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CSA are in lieu of adding the requirement in the definition of Direct Connection Network Upgrade. However, PJM did include that requirement in the definition of the Direct Connection Network Upgrade.

<sup>38</sup> *Id.* at 9-10.

<sup>39</sup> *See* PJM, Intra-PJM Tariffs, OATT, attachment P, app. 2, Option to Build (0.0.0) § 3.2.3.1 (Option).

<sup>40</sup> Filing at 10.

<sup>41</sup> *Id.*

<sup>42</sup> *Id.* In its transmittal letter, PJM states that it is proposing these changes to section "3.2.3.1," of Appendix 2 to the ICSA. However, PJM's filed Tariff language reflects these changes in Section 3.2.3.2.

land rights, as well as defining the transmission owner's right to perform line attachments and inspect, test, and energize the facilities built by the interconnection customer. Along with this revision, PJM proposes to move the option to build indemnity provision that it added as new subsection 3.2.3.2(e), in compliance with the Commission's order on AEPSC's complaint in Docket No. EL19-18-000,<sup>43</sup> in its entirety to 3.2.3.2(a)(7) to mirror the organization of *pro forma* LGIA, article 5.2. PJM states it makes no substantive revisions to the provision.<sup>44</sup>

22. Finally, PJM proposes additional revisions to Tariff, Sections 212 and 213, ICSA, Appendix 2, section 3.2.3.1 and Upgrade CSA, Appendix III, section 6.2.1 that vary from the *pro forma* LGIA. PJM proposes to require the interconnection customer to exercise the option to build within 30 days of the date the interconnection customer receives the results of the facilities study, or if no facilities study is required, after PJM completes the system impact study. PJM states that its proposal varies from the requirements of the *pro forma* LGIA that require the interconnection customer to exercise the option to build at the same time it selects the in-service date and commercial operation date. PJM states that under its current process, the interconnection customer exercises the option to build within seven days after the date that is 30 days after execution of the interconnection service agreement.<sup>45</sup> PJM argues that this after-the-fact deadline is inefficient because it requires PJM to revise the interconnection service agreement to include the customer-built facilities. PJM claims that by moving the date, the interconnection customer and transmission owner can review changes before executing the interconnection service agreement. PJM also argues that this change is consistent with the requirements of Order No. 845, which contemplates that the interconnection customer will request the option to build before executing the interconnection agreement.<sup>46</sup>

23. PJM states that it is not proposing any changes to the "Negotiated Contract Option" provision. PJM claims that, unlike the *pro forma* LGIA, PJM's negotiated contract option is an alternative to the standard option and not tied to the option to build. PJM states that under its negotiated option, the parties may agree to terms different from those included in the standard option, such as work schedule, payment provisions,

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<sup>43</sup> *American Elec. Power Serv. Corp. v. PJM Interconnection, L.L.C.*, 167 FERC ¶ 61,121, P 51 (2019) (ordering PJM to incorporate an option to build indemnity provision into the ICSA that complies with the requirements of Order No. 2003).

<sup>44</sup> Filing at 12-13.

<sup>45</sup> *Id.* at 13-14 (quoting *pro forma* ICSA, app. 2, § 3.2.3.1).

<sup>46</sup> *Id.* at 14.

incentives, penalties or damages, use of third-party contractors, and cost responsibility, regardless of whether the interconnection customer exercises the option to build.<sup>47</sup>

**b. Protests/Comments**

24. PJM Generation Developers argue that the Commission should reject PJM's proposed variation to require the interconnection customer to elect the option to build within 30 days of when it receives the results of the facilities study. PJM Generation Developers argue that, despite PJM's claims, this new timeline will not improve efficiency because PJM will still need to revise the interconnection agreements. Second, PJM Generation Developers claim that PJM has never reported inefficiencies when interconnection customers have selected the option to build, even though the option has been in place since 2003. Third, according to PJM Generation Developers, it is not clear that PJM will identify in the facilities study which network upgrades qualify for Direct Connection Network Upgrades. PJM Generation Developers request that PJM be required to identify which network upgrades might be Direct Connection Network Upgrades. Finally, PJM Generation Developers contend that interconnection customers will not have the information necessary, including the affected system study, to determine whether it should exercise the option.<sup>48</sup>

25. AEPSC argues that current *pro forma* ICSA, Appendix 2, section 3.2.3.8 conflicts with proposed section 3.2.3.2(a)(iii). AEPSC states that in compliance with the Commission's order on AEPSC's complaint in Docket No. EL19-18-000, PJM proposed revisions to section 3.2.3.8 that would grant transmission owners the right to review and approve engineering designs for customer-built facilities.<sup>49</sup> AEPSC argues that this right conflicts with the scope of section 3.2.3.2(a)(iii), which grants the transmission owner the right to review and approve engineering design, equipment acceptance tests, and the construction of customer-built facilities.<sup>50</sup> AEPSC argues that with the revisions to section 3.2.3.2(a)(iii), section 3.2.3.8 should revert back to its state before the complaint proceeding began.

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<sup>47</sup> *Id.* at 15.

<sup>48</sup> PJM Generation Developers Protest at 2-4.

<sup>49</sup> AEPSC Protest at 11-12. In Docket No. ER19-1922-000, PJM proposed to add the following sentence to section 3.2.3.8: "The Interconnected Transmission Owner shall review and approve the initial drawings and engineering design of the Transmission Owner Interconnection Facilities to be constructed under the Option to Build."

<sup>50</sup> *Id.* at 14.

**c. Answer**

26. In response to PJM Generation Developers, PJM argues that its proposed variation requiring the interconnection customer to exercise the option to build within 30 days of when it receives the results of the facilities study will increase efficiency because, unlike the characterization by PJM Generation Developers, under the current process, when an interconnection customer exercises the option, it does so after the drafting process, when the interconnection agreements have been executed and filed with the Commission. PJM believes that the proposed revision is reasonable as the interconnection customer will have either a final system impact study or facilities study report and an executable interconnection service agreement that identify all required network upgrades before the parties execute the interconnection service agreement. PJM argues that moving up the election of the option to build to before executing the interconnection service agreement still provides the interconnection customer with the necessary transparency and gives PJM the opportunity to collect all requisite security associated with the project.<sup>51</sup>

27. PJM then states that the current interconnection process already provides for the information that PJM Generation Developers noted in their protest. PJM claims that currently it provides affected system information to the interconnection customer in the system impact study report, and that information is then memorialized in the interconnection agreements, which precedes the execution of those agreements.<sup>52</sup>

28. In response to AEPSC, PJM suggests, that if the Commission deems it appropriate, the Commission can direct PJM to delete the revisions proposed in the compliance filing in the AEPSC complaint proceeding to revert the language in section 3.2.3.8 back to its original state before the AEPSC complaint.<sup>53</sup>

**d. Commission Determination**

29. As discussed below, we find that PJM's proposed Tariff and *pro forma* ICSCA revisions implementing the option to build comply with the requirements of Order Nos. 845 and 845-A.

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<sup>51</sup> PJM Answer at 6-7.

<sup>52</sup> *Id.* at 8.

<sup>53</sup> *Id.* at 9.

30. We find that PJM's proposed revisions to the definition of Direct Connection Network Upgrades and to the *pro forma* ICSA and Upgrade CSA generally comply with Order Nos. 845 and 845-A.<sup>54</sup>

31. We accept PJM's proposal to incorporate *pro forma* LGIA, article 5.2, *in toto* to its option to build provisions as new subsection 3.2.3.2(a) of Appendix 2 to the ICSA. We also accept PJM's proposal to move the option to build indemnity provision in subsection 3.2.3.2(e) to new subsection 3.2.3.2(a)(7). We reject AEPSC's request to amend PJM's existing *pro forma* ICSA, Appendix 2, section 3.2.3.8. We disagree that this existing provision conflicts with new subsection 3.2.3.2(a)(iii). PJM's existing section 3.2.3.8 allows the transmission owner the right to review and approve engineering designs for facilities constructed under the option to build. New subsection 3.2.3.2(a)(iii) extends the transmission owner's existing right to review and approve under the option to build to also include equipment acceptance tests and the construction of customer-built facilities. Nothing in existing section 3.2.3.8 modifies or limits the various rights granted under new subsection 3.2.3.2(a)(iii).

32. We accept PJM's requested independent entity variations to require the interconnection customer to exercise the option to build within 30 days of the interconnection customer's receipt of the facilities study results, or if no facilities study is required, after PJM completes the system impact study.<sup>55</sup> Order Nos. 845 and 845-A provide that the interconnection customer may unilaterally elect the option to build at the same time that it selects the in-service date and commercial operation date, which occurs before the parties execute the interconnection agreement.<sup>56</sup> Similarly, PJM's proposal requires the interconnection customer to exercise the option to build before the execution of the interconnection agreement. We find that PJM's proposal is just and reasonable and

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<sup>54</sup> As noted above, the existing provisions in PJM's Tariff regarding interconnection service are based on variations the Commission previously accepted. Therefore, many of the changes that PJM proposes to comply with Order Nos. 845 and 845-A necessarily vary from the language in the Commission's *pro forma* LGIP and *pro forma* LGIP.

<sup>55</sup> See PJM, Intra-PJM Tariffs, OATT, Interconnection Service Agreement (1.0.0) § 212; PJM, Intra-PJM Tariffs, OATT, Upgrade Construction Service Agreement (1.0.0) § 213; PJM, Intra-PJM Tariffs, OATT, attachment P, app. 2, Option to Build (0.0.0) § 3.2.3.1; PJM, Intra-PJM Tariffs, OATT, attachment P, app. 2, Option to Build (0.0.0) § 3.2.3.1; PJM, Intra-PJM Tariffs, OATT, attachment GG, app. III, Option to Build (3.0.0) § 6.2.1.

<sup>56</sup> *Pro forma* LGIA art. 5.1.

accomplishes the purpose of the final rule. Accordingly, we reject PJM Generation Developers' protest on this issue.

33. We deny PJM Generation Developers' request to require PJM to identify which required facilities are eligible for the interconnection customer to construct pursuant to the option to build. We find that this request is outside the scope of this compliance proceeding, as Order Nos. 845 and 845-A did not require transmission providers to distinguish between stand alone network upgrades and other network upgrades in the facilities study report.

34. Finally, we accept PJM's proposal to not revise its "Negotiated Contract Option" provisions in its ICSA and Upgrade CSA. We find this proposal is a reasonable implementation of the flexibility allowed by Order Nos. 845 and 845-A for independent entities. Under the pre-Order No. 845 version of the negotiated option, *pro forma* LGIA article 5.1.4 provided that if the interconnection customer elected not to exercise the option to build, then the parties shall in good faith attempt to negotiate terms and conditions pursuant to which the transmission provider is responsible for the design, procurement and construction of the transmission provider's interconnection facilities and network upgrades. In Order No. 845, the Commission recognized that given its expansion of the option to build, it was necessary to revise the negotiated option to address scenarios in which an interconnection customer exercises the option to build and still wishes to negotiate certain terms and conditions. To do so, the Commission revised the negotiated option to remove the reference to the option to build.<sup>57</sup> Unlike the pre-Order No. 845 version of the negotiated option, PJM's negotiated option was not tied to the option to build. Therefore, we find PJM's existing negotiated option accomplishes the purpose of Order Nos. 845 and 845-A because interconnection customers in PJM currently have the ability to both exercise the option to build and negotiate terms and conditions under the ICSA. We accept PJM's proposal not to revise this provision.

### **3. Dispute Resolution**

35. 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>58</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

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<sup>57</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 80-81, 85.

<sup>58</sup> *Id.* P 133; *see also pro forma* LGIP § 13.5.5.

arbitration after the conclusion of the non-binding dispute resolution process if they seek a binding result.<sup>59</sup>

**a. PJM's Compliance Filing**

36. PJM states that its current arbitration process contained in Tariff Section 12.1 generally mirrors section 13.5 of the *pro forma* LGIP with one exception; it does not explicitly include generator interconnection disputes. Instead, PJM states, the provision pertains to disputes between a transmission customer and the transmission owner, or PJM. PJM proposes to add the term “New Service Customers,” which includes interconnection customers, to the arbitration process in Section 12.1 to comply with Order Nos. 845 and 845-A and to clarify that it will apply the procedures to interconnection disputes.<sup>60</sup>

37. PJM also proposes to add new Tariff Section 40, Non-binding Dispute Resolution Procedures, which it argues is consistent with new section 13.5.5 of the *pro forma* LGIP. PJM argues that this new provision establishes interconnection dispute resolution procedures that allow a disputing party to unilaterally seek dispute resolution.<sup>61</sup>

**b. Commission Determination**

38. We find that PJM's proposed Tariff changes to Section 12.1 and new section 40 comply with the requirements of Order Nos. 845 and 845-A. In Order No. 845, the Commission added new article 13.5.5 to the *pro forma* LGIP to allow a party in an interconnection dispute to unilaterally seek non-binding dispute resolution.<sup>62</sup> To comply with this requirement, PJM proposes new Tariff Section 40, establishing a non-binding dispute resolution process, which generally mirrors new LGIP article 13.5.5. PJM also amended its existing dispute resolution procedures in Tariff Section 12.1 to clarify that its dispute resolution process is available to interconnection customers. We accept PJM's proposal to add new Section 40 to its Tariff because PJM proposes to adopt the requisite language, with only limited modifications to include tariff-specific terms. We also accept PJM's proposal to amend its existing dispute resolution procedures in Tariff Section 12.1

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<sup>59</sup> Order No. 845, 163 FERC ¶ 61,043 at P 139.

<sup>60</sup> Filing at 16. PJM states that New Service Customer is defined to mean “all customers that submit an Interconnection Request, a Completed Application, or an Upgrade Request that is pending in the New Services Queue.”

<sup>61</sup> *Id.* at 17.

<sup>62</sup> Order No. 845, 163 FERC ¶ 61,043 at P 133; *see also pro forma* LGIP § 13.5.5.

and find that this revision ensures that PJM's existing dispute resolution will apply to interconnection disputes.

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

39. 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.<sup>63</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>64</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>65</sup> The Commission stated that this transparency will ensure that the method is applied on a non-discriminatory basis.<sup>66</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>67</sup>

##### a. **PJM's Compliance Filing**

40. PJM proposes revisions to its Tariff to add the *pro forma* definition of contingent facilities and to add a new Section 205.2.1, Contingent Facilities, which PJM states explains the method it uses for identifying contingent facilities. Specifically, under new Tariff Section 205.2.1, PJM proposes to identify contingent facilities by reviewing unbuilt interconnection facilities and/or network upgrades associated with a higher-queued interconnection customer upon which the interconnection customer's cost, timing, and study findings are dependent; and, if delayed or not built, could cause a need for

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<sup>63</sup> Order No. 845, 163 FERC ¶ 61,043 at P 218; *see also pro forma* LGIP § 1 (Definitions).

<sup>64</sup> Order No. 845, 163 FERC ¶ 61,043 at P 199.

<sup>65</sup> *Id.*; *see also pro forma* LGIP § 3.8.

<sup>66</sup> Order No. 845, 163 FERC ¶ 61,043 at P 200.

<sup>67</sup> *Id.* P 199; *see also pro forma* LGIP § 3.8.



interconnection restudies or reassessment of unbuilt interconnection facilities and/or network upgrades. PJM also proposes to include a list of contingent facilities in the system impact study, facilities study, and interconnection service agreement, as well as an explanation of why the specific contingent facilities were identified and how they relate to an interconnection request. New Section 205.2.1 also requires PJM to provide, upon the request of the interconnection customer, the estimated costs and in-service dates of each contingent facility, when such information is readily available and not commercially sensitive.<sup>68</sup> Finally, PJM proposes revisions to existing Tariff Section 205.2 to add contingent facilities to the list of facilities identified in the system impact study, and to add a placeholder to the specifications section of the interconnection service agreement for contingent facilities.<sup>69</sup>

**b. Protests/Comments**

41. PJM Generation Developers contend that PJM has not adequately addressed Order No. 845's contingent facility requirements because PJM's proposed language does not establish a method for identifying contingent facilities that have electric relevance to an interconnection request. They argue that this information must be included in PJM's Tariff.<sup>70</sup>

**c. Answer**

42. PJM contends that its Tariff already describes the analysis conducted to identify the facilities and upgrades needed to accommodate a new generation project. Specifically, PJM states that Tariff Section 205.2 provides that the system impact study will identify the system constraints by transmission element or flowgate related to the new generation project, including the facilities and upgrades necessary to accommodate the request. PJM also states that the list of unbuilt facilities and upgrades are included in PJM's database and are publicly available. Finally, PJM notes that additional technical implementation details relating to the system impact study are available in Manual 14A.<sup>71</sup>

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<sup>68</sup> Filing at 18-19.

<sup>69</sup> *Id.* at 18-20.

<sup>70</sup> PJM Generation Developers Protest at 4-5.

<sup>71</sup> PJM Answer at 12-13.

**d. Commission Determination**

43. We find that PJM's proposed definition of contingent facilities adopts the Commission's revisions to the *pro forma* LGIP and thus complies with the requirements of Order Nos. 845 and 845-A.

44. We find that the revised and existing Tariff provisions that PJM proposes to identify and describe PJM's method for determining contingent facilities partially comply with the requirements of Order Nos. 845 and 845-A. PJM included language in new Tariff Section 205.2.1 stating that it shall identify the contingent facilities in the system impact study by reviewing unbuilt interconnection facilities and/or network upgrades associated with an interconnection customer with a higher queue priority and that it shall include the list of contingent facilities in the system impact study, including why a specific contingent facility was identified and how it relates to the interconnection request. However, PJM's proposed Tariff Section 205.2.1 does not provide sufficient transparency to determine why a specific contingent facility was identified and how it relates to the interconnection request.<sup>72</sup>

45. Specifically, PJM'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 PJM will use as part of its method to identify contingent facilities. Without this information, an interconnection customer will not understand how PJM will evaluate potential contingent facilities to determine their relationship to an individual interconnection request.<sup>73</sup> Further, including provisions regarding specific thresholds or criteria will ensure that PJM's technical screens or analyses will be applied to interconnection requests on a consistent, not unduly discriminatory, or preferential basis.

46. We note that PJM, in its answer, explains that additional technical implementation details relating to the system impact study are available in Manual 14A.<sup>74</sup> We find that these details provide the requisite transparency required by Order Nos. 845 and 845-A regarding the specific technical screens or analyses that PJM will use as part of its method to identify contingent facilities. However, to comply with Order No. 845, the language in PJM Manual 14A must be in PJM's Tariff.<sup>75</sup> Accordingly, we require PJM

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<sup>72</sup> Order No. 845, 163 FERC ¶ 61,043 at P 199.

<sup>73</sup> See *pro forma* LGIP § 3.8 ("The method shall be sufficiently transparent to determine why a specific Contingent Facility was identified ....").

<sup>74</sup> PJM Answer at 13.

<sup>75</sup> PJM, Intra-PJM Tariffs, OATT, Contingent Facilities, (3.0.0) § 205.2.1.

to file, within 60 days of the date of this order, a further compliance filing to include the following language from Manual 14A in its Tariff to describe the technical screens or analyses that it will use as part of its method to identify contingent facilities: “The System Impact Study includes AC powerflow analysis, short circuit analysis, and stability analysis. The powerflow and stability analysis can include different sets of analyses at various load levels such as summer peak, light load, and winter peak.”<sup>76</sup>

47. In addition, although the Manual 14A language describes the technical screens or analyses PJM will use, it does not include the specific thresholds or criteria that PJM will use as part of those technical screens or analyses. We find that such information is necessary to ensure that PJM’s method for determining contingent facilities is transparent and applied to interconnection requests on a consistent, not unduly discriminatory, or preferential basis, as required by Order No. 845.<sup>77</sup> Therefore, we also require that PJM file, within 60 days of the date of this order, a further compliance filing to include in its Tariff the specific thresholds or criteria that PJM will use as part of the technical screens and analyses described in the Manual 14A language we are requiring PJM to include in its Tariff above.

48. Further, we require that PJM file, within 60 days of the date of this order, a further compliance filing to revise Section 205.2.1 of its Tariff to include the words “[T]he method shall be sufficiently transparent to determine” why a specific contingent facility was identified and how it relates to the interconnection request.

## **5. Transparency Regarding Study Models and Assumptions**

49. 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>78</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

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<sup>76</sup> PJM Interconnection, L.L.C., PJM Manual 14A, New Services Requests § 4.3 System Impact Studies <https://www.pjm.com/-/media/documents/manuals/m14a.ashx>.

<sup>77</sup> Order No. 845, 163 FERC ¶ 61,043 at P 200.

<sup>78</sup> *Id.* P 236.

sign a confidentiality agreement before the release of commercially sensitive information or critical energy infrastructure information (CEII).<sup>79</sup>

50. 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>80</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>81</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 system. Instead, the network model information should reflect the system conditions currently used in interconnection studies.<sup>82</sup>

**a. PJM's Compliance Filing**

51. To implement the changes required by Order Nos. 845 and 845-A, PJM proposes to revise Tariff, Section 36.1.7, Base Case Data, which PJM states is the comparable provision to section 2.3 of the *pro forma* LGIP.<sup>83</sup> PJM explains, however, that instead of using an OASIS, it posts a list of all its network models, base cases and underlying assumptions used for interconnection studies, including shift factors, dispatch assumptions, load power factors, and power flows on a password-protected website, subject to all appropriate confidentiality and CEII requirements. Therefore, PJM proposes to not include the OASIS posting requirement in its proposed changes to Section 36.1.7.<sup>84</sup>

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<sup>79</sup> *Id.* P 236; *see also pro forma* LGIP § 2.3.

<sup>80</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 84 (citing Order No. 845, 163 FERC ¶ 61,043 at P 241).

<sup>81</sup> *Id.* P 85 (citing 18 C.F.R. § 388.113(g)(5)(i)).

<sup>82</sup> *Id.* P 88.

<sup>83</sup> Filing at 20-21 (citing Order No. 845, 163 FERC ¶ 61,043 at P 238).

<sup>84</sup> *Id.* at 21.

**b. Commission Determination**

52. We find PJM's proposed revisions to section 36.1.7, Base Case Data, comply with the requirements of Order Nos. 845 and 845-A. In requiring a link to the information on OASIS, the Commission explained that "OASIS is the central location for all the information needed to request interconnection service."<sup>85</sup> However, PJM's OASIS site is not the central location for all the information needed to request interconnection service. Accordingly, we find that PJM's proposal not to include the posting of a link on PJM's OASIS site, but on a password-protected website,<sup>86</sup> is just and reasonable and accomplishes the purposes of Order Nos. 845 and 845-A to provide transparency regarding study models and assumptions.

**6. Definition of Generating Facility**

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

Generating Facility shall mean Interconnection Customer's device for the production *and/or storage for later injection* of electricity identified in the Interconnection Request, but shall not include the interconnection customer's Interconnection Facilities.<sup>87</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>88</sup>

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<sup>85</sup> Order No. 845, 163 FERC ¶ 61,043 at P 238.

<sup>86</sup> See Filing at 20, n.68 (citing PJM Interconnection, L.L.C., *Modeling Data*, <https://www.pjm.com/planning/rtep-development/powerflowcases.aspx>).

<sup>87</sup> Order No. 845, 163 FERC ¶ 61,043 at P 275 (additions italicized); *see also pro forma* LGIP § 1.

<sup>88</sup> Order No. 845, 163 FERC ¶ 61,043 at P 275.

**a. PJM's Compliance Filing**

54. PJM explains that its Tariff currently does not include a definition of “Generating Facility.” Instead, PJM uses the terms “Customer Facility” and “Energy Resource.” To comply with the requirements of Order Nos. 845 and 845-A, PJM proposes to continue to use those defined terms but also to add the *pro forma* definition of “Generating Facility” to the Tariff definitions, as outlined in Order No. 845.<sup>89</sup>

**b. Commission Determination**

55. We find PJM's proposed addition of the term “Generating Facility” to its Tariff complies with the requirements of Order Nos. 845 and 845-A.

**7. Interconnection Study Deadlines**

56. In Order No. 845, the Commission modified the *pro forma* LGIP to add sections 3.5.2 and 3.5.3, which require transmission providers to calculate and maintain on their OASIS sites or public websites summary statistics related to the timing of the transmission provider's processing of interconnection studies and to update those statistics on a quarterly basis. In these sections, the Commission included bracketed Tariff language to be completed by the transmission provider in accordance with the timelines established for the various studies in their LGIPs.<sup>90</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>91</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>92</sup> 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.<sup>93</sup>

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<sup>89</sup> Filing at 22.

<sup>90</sup> Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP § 3.5.2 and 3.5.3.

<sup>91</sup> Order No. 845, 163 FERC ¶ 61,043 at P 305; *see also pro forma* LGIP § 3.5.4.

<sup>92</sup> Order No. 845, 163 FERC ¶ 61,043 at P 307.

<sup>93</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 107.

a. **PJM's Compliance Filing**

57. To comply with the interconnection study requirements of Order Nos. 845 and 845-A, PJM proposes to add new Tariff Section 41, Interconnection Study Statistics, which governs how PJM will calculate processing statistics for feasibility studies, system impact studies, facilities studies, and queue withdrawals.<sup>94</sup> In this section, PJM also proposes to revise its Tariff to clarify when studies are considered complete. PJM proposes to specify that “an Interconnection Study is deemed complete on the date upon which the study itself is completed and a study report is provided to the Interconnection Customer and Interconnected Transmission Owner(s).”<sup>95</sup> PJM asserts that this clarification is consistent with Order No. 845-A, which clarified that, “[p]ursuant to the study performance metrics established in Order No. 845, the Commission uses the period between the execution of an interconnection study agreement and the date that the transmission provider provides the completed interconnection study to the interconnection customer as a time period for comparison.”<sup>96</sup>

58. PJM requests three independent entity variations of Order Nos. 845 and 845-A's requirement to institute quarterly reporting requirements. First, PJM proposes revisions to its Tariff to permit it to calculate interconnection study metrics on a six-month basis instead of quarterly, consistent with PJM's existing six-month queue cycle.<sup>97</sup> PJM argues that this variation is appropriate because it would provide a reporting program that is in line with PJM's queue cycle deadlines, which are static, and, thus, would allow for a more complete picture of the status of PJM's interconnection study processing and provide more comparable reporting information from period to period. PJM claims that reporting quarterly would not accurately reflect the information the metrics are intended to produce.<sup>98</sup>

59. In support of its request, PJM provides an example with the feasibility study metrics from 2018. PJM states that the feasibility study deadlines for PJM's queue are

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<sup>94</sup> PJM, Intra-PJM Tariffs, OATT, Interconnection Study Statistics (0.0.0) § 41.

<sup>95</sup> Filing at 28 n.84; PJM, Intra-PJM Tariffs, OATT, Interconnection Study Statistics (0.0.0) § 41.

<sup>96</sup> Filing at 28 n.84 (citing Order No. 845-A, 166 FERC ¶ 61,137 at P 103).

<sup>97</sup> *Id.* at 24 (citing *PJM Interconnection, L.L.C.*, 139 FERC ¶ 61,079 (2012) (accepting PJM's six-month queue cycle)).

<sup>98</sup> *Id.* at 23.

always January 31 and July 31.<sup>99</sup> It states that, in the first and third quarters, the study metrics accurately demonstrate PJM's performance. However, PJM argues that if it were to report on a quarterly basis, the study metrics for the second and fourth quarters would most likely reflect studies delayed from the first and third quarters. Thus, PJM contends, the metrics would not yield an accurate picture of its performance. PJM states that quarterly reporting would likely cause customer confusion resulting from the difficulties in comparing reports from quarter to quarter, frustrating the Commission's goal of increased transparency. PJM argues that allowing it to report its study metrics on a six-month basis will not mask its performance results. PJM claims that the calculation for the "late rate" that will be included in the study deadline metrics is tied to the actual number of days following the deadline.<sup>100</sup>

60. Second, PJM seeks a variation from the requirement that, should any of the study metric values calculated under these new Tariff provisions exceed 25 percent for two consecutive calendar quarters, PJM must report additional information for the next four consecutive calendar quarters and until PJM reports four consecutive calendar quarters without such values exceeding 25 percent for two consecutive quarters. PJM proposes that if it exceeds the 25 percent threshold for two six-month reporting periods, it will submit this informational report for the next two consecutive, six-month reporting periods, which it argues would be the equivalent of the four reporting periods under the Final Rule.<sup>101</sup>

61. Third, PJM requests a variance from the Commission's requirement to include a link to its OASIS site. PJM states that it does not maintain an OASIS site for transmission planning, but it posts all active interconnection requests on the PJM website. PJM also explains that it provides updates on the status of all queue activity for its stakeholders on a semi-annual basis at its planning committee meeting.<sup>102</sup>

**b. Protests/Comments**

62. PJM Generation Developers argue that the Commission should reject PJM's request for variations of Order Nos. 845 and 845-A's interconnection study and performance measurement requirements.<sup>103</sup> PJM Generation Developers argue that

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<sup>99</sup> *Id.* at 25.

<sup>100</sup> *Id.* at 26.

<sup>101</sup> *Id.* at 29.

<sup>102</sup> *Id.* at 27-28.

<sup>103</sup> PJM Generation Developers Protest at 5.



PJM's reasoning for requesting the variation is misleading because the two six-month queue periods PJM relies on in its request are not emblematic of the tasks PJM performs to move those interconnection requests through its queue. PJM Generation Developers argue PJM will be performing studies every quarter just like SPP and MISO. They also argue it is vital that PJM be required to post data on the status of its performance every quarter. PJM Generation Developers contend the purpose of this posting requirement is to provide all market participants with timely information about how PJM is doing. PJM Generation Developers contend PJM would have that information masked and not revealed for six months, which is not in the public interest.<sup>104</sup> They argue that PJM should measure its performance from the date of the signing of the interconnection study agreement through performing a facilities study, regardless of the queue process. PJM Generation Developers request that the Commission require PJM to file Tariff revisions that mirror the Commission's *pro forma* LGIP sections 3.5.2.1 through 3.5.2.4 so that PJM reports study performance on a quarterly basis.<sup>105</sup>

63. PJM Generation Developers also request that the Commission reject PJM's proposal to only file informational reports if it hits the 25 percent standard in two consecutive six-month periods. PJM Generation Developers argue that it is vital that information regarding failure to meet interconnection study deadlines be filed with the Commission so that corrective action can be considered.<sup>106</sup>

**c. Answer**

64. In its answer, PJM argues that the six-month queue window is not driving PJM's request for variation, but rather its static deadlines for the feasibility studies and system impact studies. Therefore, contrary to PJM Generation Developers protest, PJM contends that the deadlines are "emblematic of the tasks PJM performs to timely move Interconnection Requests through its queue."<sup>107</sup>

**d. Commission Determination**

65. We accept PJM's proposal in new Tariff Section 41 to calculate processing statistics for feasibility studies, system impact studies, facilities studies, and queue withdrawals. We also accept PJM's requested independent entity variations, as we find

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<sup>104</sup> *Id.* at 7.

<sup>105</sup> *Id.*

<sup>106</sup> *Id.* at 7-8.

<sup>107</sup> PJM Answer at 13-14 (citing PJM Generation Developers Protest at 6).

that they are just and reasonable and not unduly discriminatory, and accomplish the purposes of Order Nos. 845 and 845-A, as discussed below.

66. We grant PJM's first independent entity variation from the Order No. 845 requirement to post interconnection study metric information on a quarterly basis. We accept PJM's proposal to calculate interconnection study metrics on a six-month basis, consistent with its six-month queue cycle. Although the Commission in Order No. 845 required transmission providers to post interconnection study metric information on a quarterly basis, it did so to allow interconnection customers to determine whether transmission providers are completing those studies by the deadlines established in the Tariff.<sup>108</sup>

67. Because of the static deadlines in the PJM Tariff, we agree with PJM that, under PJM's six-month queue study periods, a quarterly reporting requirement is not necessary to provide interconnection customers the transparency contemplated by Order Nos. 845 and 845-A. We find that because the existing static deadlines in PJM's Tariff fall within the first and third quarters, quarterly reporting could misrepresent PJM's actual performance during the second and fourth quarters, when most, if not all, of the studies that PJM reports may be studies delayed from the first and third quarters.<sup>109</sup> We find that permitting PJM to report its performance every six months, instead of quarterly, accomplishes the purpose of Order No. 845 that reported metrics indicate the proportion of interconnection studies that the transmission provider is able to complete within the timeframes established in its Tariff.

68. We disagree with PJM Generation Developers' argument that reporting on a six-month basis would mask the status of PJM's study performance in every quarter. We find that, given that the study metrics late rate calculation is a function of the number of days late, PJM would not be able to mask an inability to meet study deadlines. Under PJM's calculation, the number of late days will be reflected in the late rate.<sup>110</sup> As a consequence, permitting PJM to report its performance metrics every six months would not allow PJM to mask its study performance.

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<sup>108</sup> Order No. 845, 163 FERC ¶ 61,043 at P 306.

<sup>109</sup> PJM, Intra-PJM Tariffs, OATT, Interconnection Feasibility Study (3.0.0) § 36.2 (setting the deadlines by which PJM must complete the Interconnection Feasibility Study for January 31 and July 31); *see also* PJM Answer at 14.

<sup>110</sup> PJM, Intra-PJM Tariffs, OATT, Interconnection Feasibility Studies Process Time, (0.0.0) § 41.1(e); Interconnection System Impact Studies Processing Time § 41.2(e); and Interconnection Facilities Studies Processing Time § 41.3(e).

69. We also grant PJM's second independent entity variation in new Tariff Section 41.6, to permit PJM to submit an informational report for the next two consecutive, six-month reporting periods, should it exceed the 25 percent threshold for two six-month reporting periods. We find that PJM's proposed variation is just and reasonable and accomplishes the purposes of Order Nos. 845 and 845-A because this submission requirement conforms to PJM's six-month queue cycle, as discussed above.

70. Finally, we grant PJM's third independent entity variation in new Tariff Section 41.5 from Order No. 845's requirement to include a link on PJM's OASIS site. As stated above, in Order No. 845, the Commission explained that "OASIS is the central location for all the information needed to request interconnection service."<sup>111</sup> However, as PJM explains, PJM's OASIS site is not the central location for all the information needed to request interconnection service, its website is. Accordingly, we find that it is just and reasonable and accomplishes the purposes of Order Nos. 845 and 845-A for PJM to not include a link on its OASIS site to the website where PJM maintains the summary of statistics related to processing interconnection studies, since this information will be available on its website.

#### **8. Requesting Interconnection Service below Generating Facility Capacity**

71. 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,<sup>112</sup> recognizing the need for proper control technologies and flexibility for transmission providers to propose penalties to ensure that the generating facility does not inject energy above the requested level of service.<sup>113</sup>

72. 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

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<sup>111</sup> Order No. 845, 163 FERC ¶ 61,043 at P 238.

<sup>112</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.

<sup>113</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.

reliability of the system.<sup>114</sup> In addition, revised *pro forma* LGIP section 3.1 states that the interconnection customer is responsible for all study costs and interconnection facility and/or network upgrade costs required for safety and reliability. The Commission also required in revised *pro forma* LGIP section 3.1 that any necessary control technologies and/or protection systems be memorialized in the LGIA.

73. 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 it must study the request at the full generator output, then it must provide a detailed written explanation to the interconnection customer. 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>115</sup>

74. 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>116</sup>

**a. Compliance Filing**

75. PJM proposes new Tariff Section 36.1.1A, which provides that PJM shall: (1) consider requests for service below the full electrical generating capability of the generating facility; and (2) study such requests at the level of service requested to identify required interconnection facilities and network upgrades. PJM states that the new Tariff provision would allow it to study the generating facility at its full electric generating capability for safety and reliability. PJM states that the interconnection customer will be

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<sup>114</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 383-84.

<sup>115</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.*

<sup>116</sup> *Id.* P 406; *see also pro forma* LGIP §§ 4.4.1 and 4.4.2.

responsible for all costs associated with the additional study and required upgrades. PJM further states that, if it determines additional network upgrades are necessary, it will specify which additional network upgrades are based on which studies and provide a detailed explanation as to why the additional network upgrades are necessary. PJM proposes to add new Schedule K, Requirements for Interconnection Service below Full Electric Generating Capability,<sup>117</sup> to its *pro forma* interconnection service agreement to include any control technology and protections systems required for such interconnection.<sup>118</sup>

76. PJM states that its current interconnection process requires interconnection customers requesting service below the full electrical generating capability of the generating facility to include all data relevant to their specific interconnection request on their feasibility study data form. To further clarify that such information must be submitted with the interconnection request, PJM proposes to modify Tariff Section 36.1.01(1)(g) to require interconnection customers to include a description of how the full electrical generating capability of the generating facility will be limited to the maximum facility output requested. Additionally, PJM proposes to add the *pro forma* language the Commission adopted in LGIP articles 6.3 and 7.3 to Tariff Sections 36.2, Interconnection Feasibility Study, and 205.2, Scope of Studies, respectively, to incorporate the Order No. 845 *pro forma* changes clarifying that requests for interconnection service below the generating facility's capability will be studied at the level of service requested unless PJM is required to study the generating facility's full electrical capability due to safety and reliability concerns.<sup>119</sup> PJM also proposes to add language to Tariff Sections 36.2 and 207, Facilities Study Procedures, to clarify that the feasibility study will consider the level of interconnection service requested by the interconnection customer, unless otherwise required to study the full electrical generating capability of the generating facility due to safety or reliability concerns and identify all control equipment necessary for below capacity requests.<sup>120</sup>

77. PJM proposes revisions to Tariff Sections 36.2A.1, 36.2A.1.2, and 36.2A.2 to allow an interconnection customer to request reduced interconnection service after submitting an interconnection request, without losing its queue priority, if it satisfies the

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<sup>117</sup> The compliance filing identifies the new schedule as "Schedule J." However, PJM includes this schedule as "Schedule K" in its proposed Tariff revisions.

<sup>118</sup> Filing at 30-31.

<sup>119</sup> *Id.* at 32.

<sup>120</sup> PJM, Intra-PJM Tariffs, OATT, Interconnection Feasibility Study (2.1.0) § 36.2, Facilities Study Procedures § 207. PJM proposed language in Section 207 is identical to the language added to Section 36.2.

thresholds set forth in the sliding-queue provisions located in Section 36.2A.1 and 36.2A.2. Under PJM's proposed Tariff revisions to Sections 36.2A.1.1 and 36.2A.1.2, an interconnection customer may request a reduction in interconnection service at two points. First, before the start of the feasibility study, an interconnection customer may reduce its interconnection service request by up to 60 percent without losing its current queue position. Second, after the start of the feasibility study, but before the return of the executed system impact study to PJM, an interconnection customer may reduce its interconnection service request by up to 15 percent of the electrical generating facility capability or maximum facility output without losing its queue priority. But if the interconnection customer seeks to reduce its project by more than 15 percent, PJM will evaluate if such a change is a material modification.<sup>121</sup> If PJM determines that the reduction in service is a material modification, then the interconnection customer can reduce its request by up to 60 percent of the electrical generating facility capability or maximum facility output and its project would be moved from its current queue position to the beginning of the next queue and a new interconnection feasibility study will be performed consistent with the timing of studies for projects submitted in the subsequent queue.

**b. Commission Determination**

78. We find that PJM's proposed revisions to Tariff Sections 36.2A.1.1, 36.2A.1.2, and 36.2A.2, satisfy Order Nos. 845 and 845-A's requirements to allow an interconnection customer to request interconnection service below its full generating facility capacity.<sup>122</sup>

79. We find that PJM satisfies Order Nos. 845 and 845A's requirement to allow an interconnection customer to request interconnection service below generating facility capacity.<sup>123</sup> PJM's proposed Tariff revisions provide that interconnection customers have two opportunities after submitting an interconnection request to submit a request to reduce interconnection service without losing its queue position, i.e., after the start of the feasibility study but before executing of the system impact study agreement, and after

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<sup>121</sup> PJM, Intra-PJM Tariffs, OATT, Modifications Prior to Executing A System Impact Study Agreement (2.0.0) § 36.2A.1.

<sup>122</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 405 and 407; Order No. 845-A, 166 FERC ¶ 61,137 at P 118.

<sup>123</sup> Order No. 845, 163 FERC ¶ 61,043 at P 405.

executing the system impact study but before executing an interconnection service agreement.<sup>124</sup>

## 9. Provisional Interconnection Service

80. In Order No. 845, the Commission required transmission providers to allow all interconnection customers to request provisional interconnection service.<sup>125</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>126</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>127</sup> and for a “Provisional Large Generator Interconnection Agreement.”<sup>128</sup>

81. In addition, the Commission added *pro forma* LGIA article 5.9.2, which details the terms for provisional interconnection service.<sup>129</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>130</sup> The

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<sup>124</sup> PJM, Intra-PJM Tariffs, OATT, (3.0.0) Modification of Interconnection Requests §§ 36.2A.1.2, 36.2A.2.

<sup>125</sup> *Id.* P 438.

<sup>126</sup> *Id.* P 441.

<sup>127</sup> *Pro forma* LGIP § 1 (Definitions); *pro forma* LGIA art. 1 (Definitions).

<sup>128</sup> *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.

<sup>129</sup> Order No. 845, 163 FERC ¶ 61,043 at P 438; *see also pro forma* LGIP § 5.9.2.

<sup>130</sup> *Id.*

Commission stated that interconnection customers are responsible for the costs for performing these provisional interconnection studies.<sup>131</sup>

**a. PJM's Compliance Filing**

82. PJM proposes to comply with the requirements of Order Nos. 845 and 845-A to provide provisional interconnection service by incorporating *pro forma* LGIA, article 5.9.2 into its Tariff and the *pro forma* definition of provisional interconnection service, as Section 1.4A.2 to Appendix 2 of Attachment O,<sup>132</sup> with minor deviations to conform to PJM's specific Tariff language and practices.

83. PJM states that it will provide for provisional interconnection service, along with regular interconnection service, within one interconnection service agreement.<sup>133</sup> PJM currently provides for provisional interconnection service under its *pro forma* interconnection service agreement.<sup>134</sup> PJM states this service is available to all interconnection customers in the queue, at any point in the queue process. The service is predicated on an interconnection customer's request that PJM perform the interim deliverability studies necessary to receive that service. PJM states it studies an interconnection customer's generating facility to determine if any system capability exists before completing certain network upgrades. PJM states that the interconnection customer is responsible for the actual costs of the studies.<sup>135</sup>

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<sup>131</sup> *Id.*

<sup>132</sup> PJM states in its transmittal letter that this new provision would be Tariff Section 1.4B. However, PJM included this provision as Tariff section 1.4A.2 in its filed Tariff revisions. *Compare* Filing at 36, *with* PJM, Intra-PJM Tariffs, OATT, attachment O, app. 2, Provisional Interconnection Service (0.0.0), § 1.4A.2. PJM also states in its transmittal letter that Section 1.4A.2 contains the following language: "*Transmission Provider will include provisions in the Interconnection Service Agreement memorializing the Provisional Interconnection Service requested.*" PJM also states that the section provides "The maximum permissible output of the Generating Facility shall be studied and updated on a frequency determined by Transmission Provider and at the Interconnection Customer's *expense and documented in the Interconnection Service Agreement.*" (emphasis added). None of the italicized language is included in PJM's proposed Tariff language.

<sup>133</sup> Filing at 34.

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*



**b. Commission Determination**

84. We find that PJM's existing provisions that provide for provisional interconnection service, as amended, partially comply with the requirements of Order Nos. 845 and 845-A, as discussed below.

85. We find that PJM's proposed definition of provisional interconnection service, which is largely identical to the *pro forma* definition, satisfies Order Nos. 845 and 845-A's requirements. We accept PJM's proposal to not include in its Tariff the definition of provisional large generator interconnection agreement, as PJM will provide for any provisional interconnection service, along with any regular interconnection service, under one interconnection service agreement.<sup>136</sup> Except as discussed below, we also accept new Section 1.4A.2 to Appendix 2 of Attachment O, which incorporates *pro forma* LGIA article 5.9.2, with modifications, to allow PJM to issue one interconnection service agreement that provides for provisional interconnection service. Consistent with Order Nos. 845 and 845-A, PJM's proposed changes allow interconnection customers to enter into provisional agreements for limited interconnection service prior to the completion of the full interconnection process.<sup>137</sup>

86. We find that PJM's proposed Section 1.4A.2 to Appendix 2 of Attachment O fails to comply with the requirement in Order Nos. 845 and 845-A to replace the bracketed placeholder in article 5.9.2 of the *pro forma* LGIA with language specifying the frequency with which PJM will study and update the maximum output of a generating facility in an interconnection service agreement that includes provisional interconnection service. Rather than proposing a frequency or triggering event to replace the bracketed language, PJM's proposed new Tariff Section 1.4A.2 just includes the bracketed language. Accordingly, we direct PJM to file, within 60 days of the date of this order, a further compliance filing that specifies a frequency for studying and updating the maximum permissible output of a generating facility subject to an interconnection service agreement that includes provisional interconnection service.

**10. Surplus Interconnection Service**

87. 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

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<sup>136</sup> *Id.* at 35.

<sup>137</sup> *See pro forma* LGIP art. 5.9.2.

interconnection service at the point of interconnection would remain the same.<sup>138</sup> Surplus interconnection service enables a new interconnection customer to utilize the unused portion of an existing interconnection customer's interconnection service within specific parameters.<sup>139</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>140</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>141</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>142</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>143</sup> 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.<sup>144</sup>

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<sup>138</sup> Order No. 845, 163 FERC ¶ 61,043 at P 467; *see also pro forma* LGIP § 1 (Definitions); *pro forma* LGIP art. 1 (Definitions).

<sup>139</sup> Order No. 845, 163 FERC ¶ 61,043 at P 467; Order No. 845-A, 166 FERC ¶ 61,137 at P 119.

<sup>140</sup> Order No. 845, 163 FERC ¶ 61,043 at P 467; *see also pro forma* LGIP §§ 3.3 and 3.3.1.

<sup>141</sup> Order No. 845, 163 FERC ¶ 61,043 at P 483; *see also pro forma* LGIP § 3.3.

<sup>142</sup> Order No. 845, 163 FERC ¶ 61,043 at PP 455, 467.

<sup>143</sup> *Id.* P 481.

<sup>144</sup> *Id.* P 499.

a. **PJM's Compliance Filing**

88. To comply with the requirements of Order Nos. 845 and 845-A, PJM proposes to add the following definition for the new term "Surplus Interconnection Service:"

'Surplus Interconnection Service' shall mean any unneeded portion of Interconnection Service established in an Interconnection Service Agreement, such that if Surplus Interconnection Service is utilized, the total amount of Interconnection Service at the Point of Interconnection would remain the same.

89. PJM also proposes to revise Tariff Section 36 to modify its existing generation interconnection procedures.<sup>145</sup> PJM states that under its proposed process, an interconnection customer desiring surplus interconnection service would submit a surplus interconnection service request, enter the interconnection study queue, and be assigned a queue position, but would move through the queue under an expedited process.<sup>146</sup> Under PJM's proposed Tariff revisions, a surplus interconnection customer's request may not exceed the existing generating facility's total amount of interconnection service,<sup>147</sup> and the surplus service generator must participate in the PJM markets as the same type of resource (capacity or energy) as the existing resource to which it is associated.<sup>148</sup> PJM also proposes two independent entity variations from Order No. 845's surplus interconnection service requirements. The first variation would permit PJM to conduct an expedited process for surplus interconnection service requests within its existing interconnection queue. The second variation would allow interconnection requests that do not qualify for surplus interconnection service to retain its queue position and proceed through the interconnection study process as a zero MW generator.

90. PJM first seeks an independent entity variation to permit it to conduct an expedited process for surplus interconnection service requests within its existing interconnection queue. After the request enters the existing queue, PJM will commence a

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<sup>145</sup> Filing at 38; PJM, Intra-PJM Tariffs, OATT, Generation Interconnection Request (2.1.0), §§ 36.1.01(c), (k); Surplus Interconnection Request, § 36.1.1B; and Surplus Interconnection Services Requests § 36.2.3.

<sup>146</sup> Filing at 38.

<sup>147</sup> PJM, Intra-PJM Tariffs, OATT, Generation Interconnection Request (2.1.0), § 36.1.1B.

<sup>148</sup> PJM, Intra-PJM Tariffs, OATT, Generation Interconnection Request (2.1.0), § 36.1.01(c).

feasibility study unique to surplus interconnection service requests. PJM argues that the feasibility study can generally be “expedited” because it would only examine a limited contingency set that focuses on the generating facility’s impact on contingency limits in the vicinity of the resource.<sup>149</sup> PJM states that, upon completion, if the feasibility study results show that: (1) no network upgrades are necessary; and (2) there are no impacts on other interconnection customers in the interconnection queue; then the surplus interconnection service customer may move forward with an interconnection service agreement.<sup>150</sup> PJM then states that, if it cannot determine from the feasibility study whether network upgrades will be necessary or whether there are impacts affecting the determination of what upgrades are necessary for interconnection customers in the interconnection queue, the interconnection customer will receive an executable system impact study agreement along with its feasibility study report. At this point, the interconnection customer can decide whether to continue with its request in the regular interconnection queue study process or withdraw from the queue.<sup>151</sup>

91. PJM explains that, although Order No. 2003-A did not require transmission providers to maintain a single integrated queue for all interconnection and transmission service requests, PJM added Tariff provisions in 2006 to combine the study and assignment of rights to customer-initiated projects and transmission service requests under a single, integrated queue. PJM states it has conducted a single, integrated queue since 2006 with one exception.<sup>152</sup>

92. PJM explains that in 2012 it attempted to create a separate, expedited queue process for small generation projects. However, PJM states that, several years into the process, it determined that it was not realizing its efficiency goals. More specifically, PJM states that it determined that waiting until the queue window closed to commence studies for small projects that satisfied certain screening criteria resulted in a later completion of studies for projects than if smaller projects had been evaluated on a sequential, on-going basis within the queue. PJM states that the Commission allowed PJM to eliminate the alternative queue process in 2017.<sup>153</sup> PJM argues that given the

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<sup>149</sup> Filing at 42. PJM cites to proposed Tariff § 36.1.1B, but we note that the proposed change is reflected in the filed Tariff in § 36.2.3.

<sup>150</sup> *Id.*; see also PJM, Intra-PJM Tariffs, OATT, Surplus Interconnection Service Requests (2.1.0), § 36.2.3c.

<sup>151</sup> Filing at 42-43.

<sup>152</sup> *Id.* at 40-41.

<sup>153</sup> *Id.* at 42 (citing *PJM Interconnection, L.L.C.*, Docket No. ER17-2232-000 (Sept. 11, 2017) (delegated order)).

PJM established procedures, Order No. 845's objectives would be met more effectively if undertaken through an expedited process within PJM's existing interconnection queue process rather than outside of that process.<sup>154</sup>

93. PJM claims that the process it now proposes for surplus interconnection service is similar to the way it studies small generator interconnection requests. PJM notes that both types of requests require the customer to enter the interconnection queue by completing a feasibility study agreement; the feasibility study for both types of service can be expedited in the same manner; and both types of requests proceed to the interconnection agreement stage without further study when no network impacts are identified. PJM argues that this proposal will facilitate the implementation of the new process for surplus interconnection service.<sup>155</sup>

94. PJM also argues that this proposal is more transparent because it enables other generators in the interconnection queue to access information regarding the surplus interconnection service requests, which will be posted to the PJM website just like all other interconnection requests. PJM claims this will put all subsequent customers in the queue on notice of a request that may impact their own request, therefore promoting a more informed interconnection process.<sup>156</sup>

95. PJM seeks a second variation from the requirements of Order Nos. 845 and 845-A to allow the interconnection customer requesting surplus interconnection service that does not qualify for such service to remain in the interconnection queue and continue through the remaining study processes as a zero MW interconnection request. PJM states that this part of the proposal is possible because PJM is proposing to use its current interconnection process for surplus interconnection service.<sup>157</sup>

96. PJM states that, if after completing the feasibility study PJM determines that the requested service does not qualify as surplus interconnection service, because the interconnection customer already has a queue position, that customer may move forward through the standard interconnection study process without having to re-enter the queue with a new interconnection request and queue priority.<sup>158</sup>

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<sup>154</sup> *Id.* at 37.

<sup>155</sup> *Id.* at 43.

<sup>156</sup> *Id.* at 44.

<sup>157</sup> *Id.*

<sup>158</sup> *Id.* at 44-45.

**b. Protests/Comments**

97. Sandhills urges the Commission to reject PJM's proposed revisions to Tariff Sections 36.1.01(c) and Section 36.1.1B. Sandhills notes that Section 36.1.01(c) disallows a surplus service request from designating a MW portion of their facility's capability as a capacity resource, while section 36.1.1B provides that a generating facility requesting surplus interconnection service associated with an existing generating facility that is a capacity resource can be a capacity resource only up to the amount of capacity interconnection rights already granted to the existing generating facility.<sup>159</sup> Sandhills argues that these revisions effectively preclude new generators using surplus interconnection service from serving as an additional capacity resource. Sandhills argues that these restrictions are contrary to the Commission's goal in Order No. 845 to encourage the development of new generation.<sup>160</sup>

98. PJM Generation Developers state that they appreciate that PJM has attempted to include means to take advantage of surplus interconnection availability. But PJM Generation Developers argue that PJM's zero MW proposal is confusing.<sup>161</sup> They request that the Commission order PJM to explain its zero MW proposal and the rights provided by the service.

**c. Answer**

99. In response to Sandhills, PJM argues that its compliance filing is consistent with the requirements of Order Nos. 845 and 845-A because the Final Rule specifically provided that "surplus interconnection service cannot exceed the total interconnection service already provided by the original interconnection customer's [interconnection service agreement]."<sup>162</sup>

100. In response to PJM Generation Developers, PJM explains that it will need to provide more details about this proposal in future manual updates. However, PJM reiterates its proposal, stating that it contemplates that projects entering the queue that request surplus interconnection service, but fail to qualify, will receive a feasibility study report and executable system impact study agreement. PJM explains that, at that point,

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<sup>159</sup> Sandhills Comment at 1; *see also* PJM, Intra-PJM Tariffs, OATT, Generation Interconnection Requests (8.0.0) § 36.1.01(c), Surplus Interconnection Service (8.0.0) § 36.1.1B.

<sup>160</sup> Sandhills Comment at 1.

<sup>161</sup> PJM Generation Developers Protest at 8.

<sup>162</sup> PJM Answer at 15 (citing Order No. 845, 163 FERC ¶ 61,043 at P 472).

the interconnection customer may elect to either withdraw its interconnection request or continue the study process as a zero MW generator requesting interconnection service below its generating facility's capability.<sup>163</sup>

**d. Commission Determination**

101. We find that PJM's proposed Tariff provisions regarding surplus interconnection service partially comply with the requirements of Order Nos. 845 and 845-A. Except as discussed below, we accept PJM's proposed surplus interconnection service provisions made in compliance with Order Nos. 845 and 845-A.

102. However, we reject PJM's two independent entity variations regarding surplus interconnection service. First, PJM proposes to that it conduct an expedited process for surplus interconnection service requests within its existing interconnection queue process. Second, PJM proposes a variance to allow an interconnection customer that does not qualify for surplus interconnection service to retain its queue position and proceed through the interconnection study process as a zero MW generator. We find that PJM has not provided sufficient support with respect to the first proposal and therefore, reject it. Because we are rejecting the first proposal, we reject the second proposal, which relies on acceptance of the first proposal.

103. In Order No. 845, the Commission required transmission providers to "establish an expedited process, separate from the interconnection queue" to process surplus interconnection requests.<sup>164</sup> PJM asserts that when it previously used a separate queue for small generation interconnection requests, it did not realize any efficiency benefits because it needed to wait until the queue window closed to commence studies for small projects. Based on PJM's experience with a separate queue process, PJM proposed an expedited process within its existing interconnection queue.

104. We are not persuaded by PJM's justification for this proposed variation. There are two key differences between the small generation interconnection separate queue process that PJM abandoned in 2017 and the surplus generation interconnection process required by Order Nos. 845 and 845-A.

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<sup>163</sup> *Id.*

<sup>164</sup> Order No. 845, 163 FERC ¶ 61,043 at P 467.

105. First, unlike a small generation interconnection service requests, which could require network upgrades, surplus interconnection service requests could not affect existing projects in the interconnection queue by triggering network upgrades,<sup>165</sup> thus alleviating the concern that projects would withdraw from the queue and cause further delay. Second, PJM's separate queue process for small generation interconnection service requests included Tariff provisions that explicitly required PJM to study the aggregate impacts of qualifying projects, which necessitated PJM to wait until the close of the queue to begin those studies.<sup>166</sup> However, neither Order No. 845 nor PJM's proposed Tariff revisions in Section 36.1.1B, require PJM to evaluate the aggregate impacts of projects within a certain area to determine if an interconnection request qualifies for surplus interconnection service. Because PJM does not need to evaluate the aggregate impacts of surplus service projects, PJM does not need to wait until the close of the queue to begin its surplus interconnection service studies. The PJM Tariff-imposed delay that PJM faced in the separate queue process does not exist for PJM's proposed surplus interconnection service.

106. Because we find PJM's arguments based on its experience with a separate, expedited queue process for small generation projects inapplicable to surplus interconnection service, we reject its first requested independent entity variation because PJM has not demonstrated that the proposed variation is just and reasonable, and not unduly discriminatory or preferential, and has not demonstrated that its variation accomplishes the purposes of Order No. 845. We direct PJM to file within 60 days of the date of this order, a further compliance filing that revises its surplus interconnection service proposal so that it provides an expedited interconnection process, separate from its interconnection queue, to process surplus interconnection service requests.

107. Because we are requiring PJM to amend its surplus interconnection service proposal to process surplus interconnection service requests outside of the interconnection queue process, an interconnection request that does not qualify for surplus interconnection service would not be in the interconnection queue in the first place, and thus, could not proceed as a zero MW request. Therefore, we direct PJM to file, within 60 days of the date of this order, a further compliance filing that removes the proposed Tariff provisions that would allow an interconnection request that does not

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<sup>165</sup> Order No. 845 defines surplus interconnection service as a type of service that does not require network upgrades. *Id.*

<sup>166</sup> See PJM Alternate Service Proposal Tariff Revisions, Docket No. ER12-1177-000, § 110.1.1 ("Criteria for inclusion in the Alternate Queue Process is as follows ... (v) *aggregate* impact of all projects connecting on any individual radial connection to a PJM monitored transmission facility shall not exceed 1 percent of line rating.") (emphasis added).



qualify for surplus interconnection service to proceed through the queue as a zero MW generator request.

108. We deny Sandhills' request that we reject PJM's proposed revisions to Tariff Sections 36.1.01(1)(c) and 36.1.1B. Sandhills requests that the Commission require PJM to revise Sections 36.1.01(c) and 36.1.1B to allow generators using surplus interconnection service to provide capacity that exceeds the underlying interconnection request. In Order No. 845, the Commission stated, "surplus interconnection service cannot exceed the total interconnection service already provided by the original interconnection customer's [interconnection agreement.]"<sup>167</sup> PJM's proposed Tariff Section 36.1.1B adopts this restriction on surplus interconnection service and provides that surplus interconnection service requests "cannot exceed the existing Generating Facility's total amount of Interconnection Service."<sup>168</sup> Accordingly, we reject Sandhill's request as inconsistent with Order Nos. 845 and 845-A.

### **11. Material Modifications and Incorporation of Advanced Technologies**

109. 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>169</sup> 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.<sup>170</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

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<sup>167</sup> Order No. 845, 163 FERC ¶ 61,043 at P 472.

<sup>168</sup> PJM, Intra-PJM Tariffs, OATT, Surplus Interconnection Service (8.0.0) § 36.1.1B.

<sup>169</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 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>170</sup> *Id.* P 518.

follow to assess whether an interconnection customer's proposed technological advancement is a material modification.<sup>171</sup>

110. 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>172</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>173</sup>

111. 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>174</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>175</sup> 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.<sup>176</sup>

112. 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 determination of whether a change is a permissible technological advancement to be made and the results of this determination

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<sup>171</sup> *Id.*; see also *pro forma* LGIP § 4.4.6.

<sup>172</sup> Order No. 845, 163 FERC ¶ 61,043 at P 519.

<sup>173</sup> *Id.*

<sup>174</sup> *Id.*; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

<sup>175</sup> Order No. 845, 163 FERC ¶ 61,043 at P 521.

<sup>176</sup> *Id.*

returned to the interconnection customer.<sup>177</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>178</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>179</sup>

113. 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.<sup>180</sup>

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<sup>177</sup> *Id.* P 535; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

<sup>178</sup> Order No. 845, 163 FERC ¶ 61,043 at 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>179</sup> *Id.* P 522.

<sup>180</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

a. **PJM's Compliance Filing**

114. As shown below, the Tariff provisions described in PJM's transmittal letter differ in several respects from PJM's filed Tariff language.

115. The first difference is PJM's proposed definition of "Permissible Technological Advancement." The quote below shows, in underline and strikeout, the differences from PJM's filed Tariff language against the definition quoted in PJM's transmittal letter.

Permissible Technological Advancement shall mean a proposed technological ~~change such as~~ a change to turbines, inverters, or plant supervisory controls or other similar advancements to the technology proposed in the Interconnection Request that is submitted to the Transmission Provider with an executed System Impact Study Agreement. ~~Such provided such change may~~ does not: (i) increase the capability of the Generating Facility as specified in the original Interconnection Request; ~~and or~~ (ii) represent a different fuel type from the original Interconnection Request. Any proposed technological change submitted after an executed System Impact Study Agreement is received by the Transmission Provider shall be considered a Permissible Technological Advancement ~~only~~ if it is not deemed to be a Material Modification pursuant to Tariff, Part IV, Subpart A, section 36.2A.3.<sup>181</sup>

PJM explains that, consistent with Order No. 845, the proposed definition of permissible technological advancements identifies the type of technological advancements that may be accommodated because they do not require extensive or additional studies to determine whether such a change is a material modification.<sup>182</sup> PJM further explains that it bases its proposal on the list of technological advancements in Order No. 845.<sup>183</sup>

116. PJM's second difference concerns its proposed procedure to allow permissible technological advancements requests in its interconnection process. PJM proposes this new Section 36.2A.1.3 in its transmittal letter:

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<sup>181</sup> Filing at 47; PJM, Intra-PJM Tariffs, OATT, Definitions – O – P – Q (16.0.1) (definition of "Permissible Technological Advancement").

<sup>182</sup> Filing at 47.

<sup>183</sup> *Id.* (citing Order No. 845, 163 FERC ¶ 61,043 at P 530).

At the time the Interconnection Customer submits an executed System Impact Study Agreement, the Interconnection Customer may modify its Interconnection Request to include a Permissible Technological Advancement without losing its current Queue Position by submitting the new data associated with such Permissible Technological Advancement via the PJM website, as specified in the PJM Manuals.<sup>184</sup>

And PJM proposes the following version of Section 36.2A.1.3 in its filed Tariff records:

For a request to modify a project to include a technological advancement, no later than the return of the executed System Impact Study Agreement to the Transmission Provider an Interconnection Customer may modify its project submitted in its Interconnection Request to include a technological advancement by including the new data associated with advancements to turbines, inverters, plant supervisory controls or other similar advancements to the existing technology at the same time the Interconnection Customer submits its executed System Impact Study Agreement. The System Impact Study data associated with the requested technological change must be submitted via the PJM website as specified in the PJM Manuals.

PJM states that new Section 36.2A.1.3 provides that an interconnection customer may modify its interconnection request by submitting the new data associated with permissible technological advancements via PJM's website.<sup>185</sup>

117. PJM's final difference between its transmittal letter and filed Tariff language is PJM's proposal to add new Section 36.2A.2.1. In its transmittal, PJM states that it is adding the following new Section 36.2A.2.1:

For a request to modify an Interconnection Request to include a technological advancement after returning the executed System Impact Study Agreement but prior to executing an Interconnection Service Agreement, an Interconnection Customer may request in writing to modify its Interconnection Request to add a technological advancement.

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<sup>184</sup> Filing at 47.

<sup>185</sup> *Id.*

Such request will be evaluated by the Transmission Provider consistent with Tariff, Part IV, section 36.2A.3 to determine whether such change would constitute a Material Modification. If the Transmission Provider determines that the technological advancement is not a Material Modification, the Interconnection Customer may retain its current Queue Position. If the Transmission Provider determines the change is a Material Modification, the Interconnection Customer must withdraw its technological advancement change request to retain its Queue Position. In the event a study is necessary, section 36.2A.4 shall apply.<sup>186</sup>

PJM did not include a comparable provision in its filed Tariff language.

118. PJM states that new Section 36.2A.2.1 provides that if the interconnection customer submits its request to modify its interconnection request to include a technological advancement after submitting an executed system impact study agreement and PJM determines that the technological advancement is not a material modification, the interconnection customer may retain its current queue position.<sup>187</sup> Under this provision, if PJM determines the change is a material modification, the interconnection customer must withdraw its technological advancement change request to retain its queue position. PJM states that, if a study is necessary, Section 36.2A.4 shall apply.<sup>188</sup> PJM states that it does not propose to include any additional changes to its Tariff to comply with Order No. 845's technological advancement requirements because existing Tariff Section 36.2A.4 provides that if a study is necessary PJM shall commence and perform it "as soon as practicable but, . . . no later than thirty (30) calendar days after receiving notice of the interconnection customer's request."<sup>189</sup>

119. PJM states that it is not proposing to require an additional deposit for required studies. It explains that, while Order No. 845 requires that PJM modify its Tariff to require a refundable deposit in the amount of \$10,000, or an alternative amount, to study a request to modify the interconnection request to accommodate a technological advancement, it performs such studies using the deposit provided for the study phase in

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<sup>186</sup> Filing at 48.

<sup>187</sup> *Id.* at 47-48.

<sup>188</sup> *Id.* at 48.

<sup>189</sup> *Id.*

which the modification is requested.<sup>190</sup> PJM states that, therefore, it has found no need to request an additional deposit for such studies. PJM states that the Tariff provides that the interconnection customer is responsible for actual costs and that all study costs must be paid before the interconnection customer is able to move to the next study phase.<sup>191</sup>

**b. Commission Determination**

120. We reject PJM's proposal, as discussed below.

121. As shown above, the description of PJM's proposed Tariff language in its transmittal letter varies materially from the language contained in its proposed Tariff records. To begin, in PJM's proposed technological change procedure, the new Section 36.2A.1.3 in the transmittal letter contemplates a procedure only for "Permissible Technological Advancements," while the new Section 36.2A.1.3 in PJM's proposed Tariff records contemplates a procedure for all technological requests. Further, new Section 36.2A.2.1 in the transmittal letter sets forth a procedure for technological requests after execution of the system impact study agreement, but before execution of the interconnection service agreement. The proposed Tariff records do not include any such procedure. Given these inconsistencies and the resulting confusion, we are unable to determine whether PJM's proposal complies with Order No. 845 and 845-A's material modification and incorporation of advanced technologies requirements. Accordingly, we direct PJM to submit a further compliance filing, within 60 days of the date of this order, clarifying its proposed technological change procedure.

122. PJM's description of its proposed definition of "Permissible Technological Advancement" in its transmittal letter also varies materially from the language contained in its proposed Tariff records. The transmittal letter definition provides that to qualify as a "Permissible Technological Advancement" the "change may not: (i) increase the capability of the Generating Facility as specified in the original Interconnection Request; *and* (ii) represent a different fuel type from the original Interconnection Request."<sup>192</sup> But the Tariff definition provides that the change may not: "(i) increase the capability of the Generating Facility as specified in the original Interconnection Request; *or* (ii) represent a different fuel type from the original Interconnection Request."<sup>193</sup> Based on PJM's description of its proposal in its transmittal letter, it would appear that "or" is what PJM

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<sup>190</sup> *Id.* at 48-49.

<sup>191</sup> *Id.* at 49.

<sup>192</sup> *Id.* at 46-47.

<sup>193</sup> *Id.* at 47-48; *and* PJM, Intra-PJM Tariffs, OATT, Definitions – O – P – Q

intended, which would be consistent with Order No. 845. However, the proposed definition described in PJM's transmittal letter also states that any proposed technological change submitted after an executed system impact study agreement is *received* by PJM shall be considered a "Permissible Technological Advancement" only if it is not deemed to be a material modification, while the Tariff definition provides that any proposed technological change submitted after an executed system impact study agreement is *submitted* to the Transmission Provider shall be considered a Permissible Technological Advancement if it is not deemed to be a material modification. It is unclear from PJM's transmittal which provision PJM intended. Also, the definition of "Permissible Technological Advancement" should make clear what category of technological advancements can be accommodated that do not require extensive or additional studies to determine whether a proposed technological advancement is a material modification.<sup>194</sup> Accordingly, we direct PJM to submit a further compliance filing, within 60 days of the date of this order, clarifying its proposed "Permissible Technological Advancement" definition consistent with this direction.

123. We emphasize that to the extent PJM seeks a variation from the Commission's requirements in Order Nos. 845 and 845-A, it must demonstrate that the proposed variation: (1) is just and reasonable, and not unduly discriminatory or preferential; and (2) accomplishes the purposes of the order.<sup>195</sup> It is not a sufficient justification to state that a variation conforms to current PJM's practices or to its Tariff definitions and terminology. For example, to the extent PJM intended to allow an interconnection customer to incorporate certain technological advancements into its interconnection request, prior to the execution of the system impact study agreement, as opposed to the interconnection facilities study agreement, as set forth in section 4.4.2(c) of the *pro forma* LGIA, without risking the loss of its queue position, such a proposal would require an independent entity variation. Further, the final rule required that the procedure must "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>196</sup> and if a study is required, "the types of information and/or study inputs that the interconnection customer must provide to the transmission provider" (e.g., study scenarios, modeling data, and any other assumptions).<sup>197</sup> The final rule also requires that the procedure explain "how the transmission provider will evaluate the technological advancement

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(16.0.1) (definition of "Permissible Technological Advancement") (emphasis added).

<sup>194</sup> Order No. 845, 163 FERC ¶ 61,043 at P 530.

<sup>195</sup> *See supra* P 15.

<sup>196</sup> Order No. 845, 163 FERC ¶ 61,043 at P 519.

<sup>197</sup> *Id.* P 521.



request to determine whether it is a material modification.”<sup>198</sup> PJM’s proposed language in its transmittal and proposed and existing Tariff records are unclear in each of these respects, but to the extent PJM seeks a variation from the Commission’s requirements in Order Nos. 845 and 845-A, it must make the demonstrations set forth above.

124. Lastly, with regard to a deadline for the completion of a technological 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>199</sup> However, PJM states that it is not proposing additional changes to comply with Order Nos. 845 and 845-A’s 30-day requirement.<sup>200</sup> PJM explains that existing Tariff Section 36.2A.4 provides that if a study is necessary, PJM “shall commence such studies no later than thirty (30) calendar days after receiving notice of the Interconnection Customer’s request.”<sup>201</sup> Accordingly, we direct PJM 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 PJM will determine whether or not a technological advancement is a material modification within 30 calendar days of receipt of the initial request.

## 12. Effective Date of PJM’s Compliance Filing

125. In Order No. 845-A, the Commission clarified the effective date of the required tariff revisions, stating that it would follow the approach taken in Order No. 2003 and its progeny as closely as possible.<sup>202</sup> The Commission clarified that “[f]or each RTO/ISO, the effective date of the proposed revisions shall be the date established in the

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<sup>198</sup> *Id.*

<sup>199</sup> *Id.* P 535; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

<sup>200</sup> Order No. 845, 163 FERC ¶ 61,043 at P 535.

<sup>201</sup> Filing at 48; PJM, Intra-PJM Tariffs, OATT, Modification of Interconnection Request (2.0.0) § 36.2A.4.

<sup>202</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 162. During the Order No. 2003 compliance process, for RTOs/ISOs, the Commission stated that “[u]ntil the Commission acts on [their] compliance filings, the [RTOs’/ISOs’] existing Commission-approved interconnection standards and procedures will remain in effect.” Order No. 2003, 104 FERC ¶ 61,103 at P 3; *see also* Order No. 2003-A, 106 FERC ¶ 61,220 at P 43 (stating that, in “either event, the [RTOs’/ISOs’] currently effective OATT will remain in effect pending any necessary Commission action.”).

Commission's order accepting that RTO's/ISO's compliance filing, which will be no earlier than the issuance date of such an order."<sup>203</sup>

**a. PJM's Compliance Filing**

126. PJM requests that the Commission allow for an effective date to coincide with the beginning of the next interconnection queue after the Commission's order accepting PJM's proposed revisions, but no earlier than the next queue cycle that begins on April 1, 2020. PJM argues that this effective date will allow it to implement necessary changes in its manuals and in several PJM applications required as a result of the new revisions proposed, including those concerning surplus interconnection service. PJM also contends that setting the effective date to coincide with the beginning of the next queue not only is administratively easier for PJM to implement, but also ensures that all prospective interconnection customers within their respective interconnection queues are treated similarly. PJM states that the Commission has granted similar requests for variances to the effective date of compliance filings in the past to allow PJM compliance filings filed to coincide with the beginning of the next queue cycle.<sup>204</sup>

127. PJM also proposes that its proposed changes apply only to interconnection customers entering the interconnection queue on, or after, April 1, 2020.<sup>205</sup>

**b. Protests/Comments**

128. Clean Energy Entities oppose PJM's requested effective date. Clean Energy Entities argue that, should the Commission accept PJM's requested effective date, then rates, terms, and conditions that have been specifically found to be unjust and unreasonable will be allowed to remain in place for an excessive period—while a just and reasonable replacement rate has already been approved. Accordingly, Clean Energy Entities request that the Commission make PJM's filing effective no more than 60 days following the date of the Commission's order approving PJM's Order No. 845 compliance filing.<sup>206</sup> Further, Clean Energy Entities argue that the precedent PJM cites is inapposite. They argue that, in one case, PJM requested a November 1 effective date for a filing submitted on August 4 (89 days later, essentially an additional month beyond the

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<sup>203</sup> Order No. 845-A, 166 FERC ¶ 61,137 at P 166.

<sup>204</sup> Filing at 49-50 (citing *PJM Interconnection, L.L.C.*, 149 FERC ¶ 61,265 (2014); and *PJM Interconnection, L.L.C.*, Docket No. ER17-108-000 (Jan. 5, 2017) (delegated order)).

<sup>205</sup> Filing at 50.

<sup>206</sup> Clean Energy Entities Protest at 5.

typical 60 days), while in the other case PJM sought and received a November 1 effective date for a filing made on October 16 (18 days later).<sup>207</sup>

129. PJM Generation Developers request that the Commission reject PJM's requested effective date. PJM Generation Developers argue that numerous features of PJM's compliance filing have nothing to do with the processing of PJM's queue and its associated queue cycles, including reforms related to: the expanded option to build, contingent facilities, surplus interconnection service, transparency of study models and assumptions, interconnection study reporting deadlines, requesting interconnection service below full generating facility capacity, provisional interconnection service, dispute resolution, and permissible technological advancements. PJM Generation Developers argue that these reforms should be implemented as soon as possible given that the Commission found these reforms were needed to remedy unjust and unreasonable interconnection practices.<sup>208</sup>

130. Lendlease requests that PJM modify its requested effective date so that the proposed option to build revisions apply to projects currently in the queue that have not yet executed an interconnection service agreement and require further studies as part of the interconnection process. Lendlease argues that there is no reason for PJM to forestall implementing these changes, and the delay in implementation could increase the cost and liquidity risk of interconnection customers.<sup>209</sup>

**c. Answer**

131. PJM argues that requiring implementation on a date other than the start date of a new queue would subject PJM projects in the same queue to different procedures. For instance, PJM argues that, under the current option to build provisions, an interconnection customer may wish to build transmission owner Non-Direct Connection Network Upgrades, as permitted under the current Tariff. However, PJM contends that, under its compliance filing, transmission owner Non-Direct Connection Network Upgrades are no longer accessible under the option to build and, therefore, the interconnection customer in the existing queue would not be permitted to build Non-Direct Connection Network Upgrades under the option to build.<sup>210</sup>

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<sup>207</sup> *Id.*

<sup>208</sup> PJM Generation Developers Protest at 9.

<sup>209</sup> Lendlease Protest at 4-5.

<sup>210</sup> PJM Answer at 4.

132. PJM also argues that, even if the Commission issued an order shortly after PJM made its compliance filing, it would be very difficult to implement the changes in its manuals and modify its software applications without sufficient lead time.<sup>211</sup>

**d. Commission Determination**

133. We accept PJM's requested April 1, 2020 effective date. We find PJM's proposed April 1, 2020 effective date reasonable, given the software and manual changes PJM needs to make before implementing some of the compliance requirements.

134. However, we reject PJM's proposal to apply its proposed changes only to interconnection customers that enter the interconnection queue on, or after, April 1, 2020. PJM has not demonstrated why the reforms in its compliance filing cannot apply to interconnection customers that entered the interconnection queue prior to April 1, 2020. Accordingly, we direct PJM to apply its proposed Tariff revisions to all interconnection customers that have not signed a generator interconnection service agreement as of April 1, 2020, regardless of when they entered the interconnection queue.

The Commission orders:

(A) PJM's compliance filing is hereby accepted in part, effective as of April 1, 2020, and rejected in part, as discussed in the body of this order.

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

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

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<sup>211</sup> PJM Answer at 4-5.