

166 FERC ¶ 61,137
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 37

[Docket No. RM17-8-001; Order No. 845-A]

Reform of Generator Interconnection Procedures and Agreements

(Issued February 21, 2019)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Order on rehearing and clarification.

SUMMARY: The Federal Energy Regulatory Commission is granting in part and denying in part the requests for rehearing and clarification of its determinations in Order No. 845, which amended the Commission's *pro forma* Large Generator Interconnection Procedures and *pro forma* Large Generator Interconnection Agreement to improve certainty, promote more informed interconnection decisions, and enhance interconnection processes.

EFFECTIVE DATE: This order on rehearing and clarification will become effective

[75 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

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SUPPLEMENTARY INFORMATION:

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FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Cheryl A. LaFleur and Richard Glick.

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Agreements

Docket No. RM17-8-001

ORDER NO. 845-A

ORDER ON REHEARING AND CLARIFICATION

(Issued February 21, 2019)

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I. Introduction and Background

1. On April 19, 2018, the Federal Energy Regulatory Commission (Commission) issued Order No. 845.¹ Order No. 845 revised the Commission’s *pro forma* Large Generator Interconnection Procedures (LGIP) and *pro forma* Large Generator Interconnection Agreement (LGIA) to improve certainty for interconnection customers, promote more informed interconnection decisions, and enhance the interconnection process.² The Commission expected these reforms to provide interconnection customers with better information and more options for obtaining interconnection service and that, as a result, there would likely be fewer interconnection requests overall and fewer interconnection requests that do not reach commercial operation. The Commission also anticipated that, as a result of these reforms, transmission providers would

¹ *Reform of Generator Interconnection Procedures and Agreements*, Order No. 845, 163 FERC ¶ 61,043 (2018).

² *Id.* P 2. The *pro forma* LGIP and *pro forma* LGIA establish the terms and conditions under which public utilities that own, control, or operate facilities for transmitting energy in interstate commerce must provide interconnection service to large generating facilities. *Id.* P 6. A large generating facility is “a Generating Facility having a Generating Facility Capacity of more than 20 [megawatts (MW)].” *See, e.g., pro forma* LGIA Art. 1 (Definitions).

be able to focus on those interconnection requests that are most likely to reach commercial operation.³

2. In Order No. 845, the Commission adopted ten different reforms in three general categories. First, in order to improve certainty for interconnection customers, Order No. 845: (1) removed the limitation that interconnection customers may only exercise the option to build a transmission provider's interconnection facilities⁴ and stand alone network upgrades⁵ in instances when the transmission provider cannot meet the dates proposed by the interconnection customer; and (2) required that transmission providers

³ Order No. 845, 163 FERC ¶ 61,043 at P 2.

⁴ According to the *pro forma* LGIA:

Transmission Provider's Interconnection Facilities shall mean all facilities and equipment owned, controlled or operated by the Transmission Provider from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Transmission Provider's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Pro forma LGIA Art. 1 (Definitions).

⁵ Stand alone network upgrades:

shall mean 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.

establish interconnection dispute resolution procedures that allow a disputing party to unilaterally seek non-binding dispute resolution. Second, to promote more informed interconnection decisions, Order No. 845: (1) required transmission providers to outline and make public a method for determining contingent facilities; (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. Third, Order No. 845 aimed to enhance the interconnection process by: (1) allowing an interconnection customer to request a level of interconnection service that is lower than its 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 at existing points of interconnection; and (4) requiring transmission providers to set forth a procedure to allow transmission providers to assess and, if necessary, study an interconnection customer’s technology changes without affecting the interconnection customer’s queued position. In Order No. 845, the Commission made “no changes to the variations allowed by Order No. 2003” and further explained that “on compliance,

transmission providers may argue that they qualify for . . . variations from the requirements of [Order No. 845].”⁶

3. The Commission received twelve requests for rehearing and/or clarification of Order No. 845.⁷ The rehearing and clarification requests raise issues related to all but one of the reforms adopted therein.⁸ Generation Developers also request rehearing of the Commission’s decision not to adopt a reform pertaining to congestion and curtailment information as the Commission proposed in the Notice of Proposed Rulemaking (NOPR).⁹ Some requests for rehearing and clarification also raised general or process

⁶ Order No. 845, 163 FERC ¶ 61,043 at P 43 (citing *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 (2004), *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)).

⁷ Appendix A provides the short names of the entities that filed requests for rehearing or clarification.

⁸ No entity requested clarification or rehearing regarding the dispute resolution reform adopted in Order No. 845.

⁹ *Reform of Generator Interconnection Procedures and Agreements*, 157 FERC ¶ 61,212 (2016).

concerns.¹⁰ For the reasons discussed below, we grant in part and deny in part the requests for rehearing and clarification.¹¹

4. In particular, we grant rehearing with regard to the option to build reform to: (1) require that transmission providers explain why they do not consider a specific network upgrade to be a stand alone network upgrade; and (2) allow transmission providers to recover oversight costs related to the interconnection customer's option to build. We also grant rehearing with regard to the surplus interconnection service reform to explain that the Commission does not intend to limit the ability of RTOs/ISOs to argue that an independent entity variation from the Commission's surplus interconnection service requirements is appropriate. We also grant rehearing in part and find that, with regard to the reform for requesting interconnection service below generating facility

¹⁰ ISO New England Inc. (ISO-NE) filed an answer to AWEA's request for clarification. Rule 713(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.713(d) (2018), prohibits answers to requests for rehearing. Although AWEA has styled its pleading as a request for clarification, we consider it to be a request for rehearing and, on that basis, reject ISO-NE's answer. As a result, we also dismiss AWEA's answer to ISO-NE's answer, as well as Ameren and MISO TOs' answer to AWEA's answer.

¹¹ In Appendices B and C of this order, we provide all the revisions to, and additions of, provisions in the *pro forma* LGIP and the *pro forma* LGIA that the Commission made in Order No. 845 and this order on rehearing and clarification, Order No. 845-A. The underline and strikethrough in these appendices respectively reflect additions to, and deletions from, the *pro forma* LGIP and the *pro forma* LGIA made in Order Nos. 845 and Order No. 845-A. Additionally, these Appendices reflect several non-substantive corrections in these appendices to address stylistic inconsistencies in some of the new and revised *pro forma* LGIP and *pro forma* LGIA provisions. For example, in *pro forma* section 3.8, we have replaced the term "GIA" with "Large Generator Interconnection Agreement" and have capitalized some terms that are defined in the *pro forma* LGIP and/or the *pro forma* LGIA.

capacity, an interconnection customer may propose control technologies at any time in the interconnection process that it is permitted to request interconnection service below generating facility capacity.

5. Additionally, we grant clarification with regard to the option to build by finding that: (1) the Order No. 845 option to build provisions apply to all public utility transmission providers, including those that reimburse the interconnection customer for network upgrades; and (2) the option to build does not apply to stand alone network upgrades on affected systems. We also grant clarification with regard to transparency regarding study models and assumptions to find that: (1) transmission providers may use the Commission's critical energy/electric infrastructure information (CEII) regulations as a model for evaluating entities that request network model information and assumptions; and (2) 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. With regard to the interconnection study deadlines reform, we grant clarification that the date for measuring study performance metrics and the reporting requirements do not require transmission providers to post 2017 interconnection study metrics. With regard to requesting interconnection service below generating facility capacity, we grant clarification that a transmission provider must provide a detailed explanation of its determination to perform additional studies at the full generating facility capacity for an interconnection customer that has requested service below its full generating facility capacity. Finally, in this order, we deny all other requests for rehearing and clarification.

II. Discussion

A. Interconnection Customer's Option to Build

6. In Order No. 845, the Commission adopted a reform revising articles 5.1, 5.1.3, and 5.1.4 of the *pro forma* LGIA to allow interconnection customers to unilaterally select the option to build for stand alone network upgrades and transmission provider's interconnection facilities regardless of whether the transmission provider can complete construction of such facilities by the interconnection customer's proposed in-service date, initial synchronization date, or commercial operation date.¹² 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. The Commission stated that the revisions adopted in Order No. 845 would "benefit the interconnection process by providing interconnection customers more control and certainty during the design and construction phases of the interconnection process."¹³

1. Ameren Decision

7. On January 26, 2018, less than three months prior to Order No. 845's issuance, the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) decided *Ameren Services Co. v. FERC*,¹⁴ a decision that vacated and remanded prior Commission decisions affecting the Midcontinent Independent System Operator, Inc.

¹² Order No. 845, 163 FERC ¶ 61,043 at PP 73-74.

¹³ *Id.* P 85.

¹⁴ 880 F.3d 571 (D.C. Cir. 2018) (*Ameren*).

(MISO).¹⁵ Several requests for rehearing of Order No. 845 refer to the *Ameren* decision. To explain the context of these arguments, we provide some background regarding the Order No. 2003 interconnection pricing policy¹⁶ and network upgrade cost responsibility in MISO. We also provide a short summary of *Ameren*.

8. In Order No. 2003, the Commission drew a distinction between interconnection facilities, which are “found between the Interconnection Customer’s Generating Facility and the Transmission Provider’s Transmission System,”¹⁷ and network upgrades, which “include only facilities at or beyond the point where the Interconnection Customer’s Generating Facility interconnects to the Transmission Provider’s Transmission System.”¹⁸ Under Order No. 2003, this classification determines which party has ultimate cost responsibility. Interconnection facilities “[are] paid for solely by the

¹⁵ In *Ameren*, the D.C. Circuit referred to the NOPR in this proceeding but only as it pertained to the Commission’s original proposal to require agreement between a transmission owner and an interconnection customer before the transmission owner could elect to initially fund network upgrades. *See* Order No. 845, 163 FERC ¶ 61,043 at P 122 (citing *Ameren*, 880 F.3d at 585). The Commission opted to not move forward with that particular proposal in “light of the [*Ameren*] decision.” *Id.*

¹⁶ We use this term, consistent with its use in Order No. 2003, to refer to Order No. 2003’s policy of distinguishing interconnection facilities and network upgrades for the purpose of assigning ultimate cost responsibility. *See, e.g.*, Order No. 2003, 104 FERC ¶ 61,103 at PP 675-76.

¹⁷ *Id.* P 21.

¹⁸ *Id.*

Interconnection Customer” and network upgrades “[are] funded *initially* by the Interconnection Customer (unless the Transmission Provider elects to fund them).”¹⁹

9. While the Order No. 2003 interconnection pricing policy requires interconnection customers to initially fund network upgrades (unless the transmission provider elects to fund them), Order No. 2003 established a crediting policy to reimburse interconnection customers for these costs.²⁰ In particular, if the network upgrades necessary for an interconnection are “funded initially by the Interconnection Customer,” the interconnection customer “would then be entitled to a cash equivalent refund . . . equal to the total amount paid for the Network Upgrades.”²¹ Under this policy, the transmission provider must pay the total amount that the interconnection customer paid for network upgrades as “credits against the Interconnection Customer’s payments for transmission services.”²² Order No. 2003-B states that “the period for reimbursement may not be longer than the period that would be required if the Interconnection Customer paid for

¹⁹ *Id.* P 22 (emphasis added).

²⁰ In Order No. 2003, the Commission refers to this policy of reimbursing interconnection customers for the cost of network upgrades as its “crediting policy.” *See, e.g., id.* P 683. In this order, we refer to this mechanism as the Order No. 2003 crediting policy.

²¹ *Id.* P 22.

²² *Id.*

transmission service directly and received credits on a dollar-for-dollar basis, or 20 years [from the generating facility's commercial operation date], whichever is less.”²³

10. MISO sought, and the Commission granted, an independent entity variation for MISO to depart from the Order No. 2003 crediting policy.²⁴ Instead, MISO directly assigns to interconnection customers 90 percent of the costs for network upgrades rated 345 kV and above (with the remaining 10 percent recovered on a system-wide basis) and 100 percent of the costs for network upgrades rated below 345 kV.²⁵

11. In addition, under the interconnection pricing policy that MISO proposed and the Commission accepted, MISO's tariff provides MISO transmission owners two options for recovering network upgrade capital costs from interconnection customers. Under the first option, which we refer to in this order as MISO's interconnection customer initial funding option, the interconnection customer would fund the network upgrades prior to construction, and the MISO transmission owner would not refund the non-reimbursable portion of this capital (the 90 or 100 percent) to the interconnection customer, and would neither include the capital in its rate base nor charge the interconnection customer a return on this capital.²⁶ Under the second option, the MISO transmission owner would

²³ Order No. 2003-B, 109 FERC ¶ 61,287 at PP 3 & 36.

²⁴ *Midwest Indep. Transmission Sys. Operator, Inc.*, 129 FERC ¶ 61,060, at P 59 (2009), *order denying reh'g*, 154 FERC ¶ 61,073 (2016).

²⁵ *Id.* P 8.

²⁶ *See Midcontinent Indep. Sys. Operator, Inc.*, 151 FERC ¶ 61,220, at P 5 (2015).

pay for the construction of the network upgrades and then recover the interconnection customer's portion of the cost burden over time through periodic network upgrade charges²⁷ that include a return on the capital investment.²⁸ In this order, we refer to this option as MISO's transmission owner initial funding option.

12. On June 18, 2015, in response to a complaint relating to these network upgrade initial funding options, the Commission instituted a proceeding under FPA section 206 to examine MISO's *pro forma* GIA, the *pro forma* Facilities Construction Agreement, and *pro forma* Multi-Party Facilities Construction Agreement.²⁹ To support this decision, the Commission stated that allowing MISO transmission owners to unilaterally "select transmission owner [initial] funding may be unjust, unreasonable, unduly discriminatory"³⁰ and "may increase costs of interconnection service . . . with no corresponding increase in service."³¹

²⁷ As noted by the D.C. Circuit, this network upgrade charge "paid from the incoming generator . . . includes *both* a return *of* capital . . . and a return *on* capital" and is, according to the D.C. Circuit, "thus economically equivalent to inclusion in the rate base, with the exception that they are charged specifically to the incoming generator rather than to all of the transmission owner's customers." *Ameren*, 880 F.3d at 576 (emphasis in original).

²⁸ See *Midcontinent Indep. Sys. Operator, Inc.*, 151 FERC ¶ 61,220 at P 8.

²⁹ *Id.* P 2.

³⁰ *Id.* P 53.

³¹ *Id.* P 48.

13. On December 29, 2015, the Commission denied rehearing on the June 2015 order. In particular, it stated that “because there is the possibility for an increase in costs presented by a transmission owner’s unilateral election [of transmission owner initial funding] as compared with [interconnection customer initial funding], and yet there is no increase in interconnection service provided, such unilateral election is unjust and unreasonable.”³² For this reason, it directed MISO to revise its tariff “to remove the ability of a transmission owner to unilaterally elect to initially fund network upgrades.”³³ In response to a request for rehearing on that order, the Commission again denied rehearing, finding that the December 29, 2015 order did not deprive MISO transmission owners of the opportunity to earn a return “to which they are entitled” because pursuant to the interconnection customer initial funding option, “the [MISO] transmission owner makes no investment of which, or on which, it is entitled to a return.”³⁴

14. The petitioners in *Ameren* challenged these three decisions regarding MISO’s options for transmission owners to recover network upgrade capital costs from

³² *Otter Tail Power Co. v. Midcontinent Indep. Sys. Operator, Inc.*, 153 FERC ¶ 61,352, at P 32 (2015).

³³ *Id.* P 65.

³⁴ *Otter Tail Power Co. v. Midcontinent Indep. Sys. Operator, Inc.*, 156 FERC ¶ 61,099, at P 12 (2016). The Commission also stated that its “task is to allow a public utility the opportunity to offer its investors a return commensurate with the risk associated with their investment, as represented by the utility’s business and financial risks” and that, under the interconnection owner initial funding option, “the transmission owner does not bear that risk.” *Id.* P 13.

interconnection customers.³⁵ The D.C. Circuit vacated and remanded the orders, finding that the Commission had not adequately responded to MISO transmission owner concerns that MISO’s interconnection customer initial funding option “compels [transmission owners] to construct, own, and operate facilities without compensatory network upgrade charges—thus forcing them to accept additional risk without corresponding return as essentially non-profit managers of [network] upgrade facilities.”³⁶ Regarding these risks, the D.C. Circuit stated that MISO transmission owners would have to “assume certain costs that are never compensated” such as “liability for insurance deductibles and all sorts of litigation, including environmental and reliability claims.”³⁷ Moreover, the D.C. Circuit stated that the MISO orders at issue suggest that the Commission does not believe that MISO transmission owners are entitled “to earn a return on capital” for network upgrades funded through MISO’s interconnection customer initial funding despite transmission owners’ assumption of such costs.³⁸ For these reasons, the D.C. Circuit stated that the Commission “must explain

³⁵ *Ameren*, 880 F.3d at 573.

³⁶ *Id.*

³⁷ *Id.* at 580.

³⁸ *Id.* at 581.

how investors could be expected to underwrite the prospect of potentially large non-profit appendages with no compensatory incremental return.”³⁹

a. Requests for Rehearing and Clarification

15. MISO TOs, Ameren, and EEI argue that Order No. 845’s option to build revisions are contrary to (1) the regulatory compact (under which utilities construct facilities, have an obligation to serve, and receive a level of earnings in return) and (2) the D.C. Circuit decision in *Ameren*.⁴⁰ EEI argues that Order No. 845 fails to consider that transmission owners should receive compensation for the risk of owning and operating facilities. Additionally, MISO TOs, EEI, and Ameren argue that the Commission should grant rehearing and return to the pre-Order No. 845 option to build provisions.⁴¹

16. MISO TOs argue that the revised option to build “could impact the transmission provider’s ability to construct, fund, and earn a return on stand alone network upgrades and transmission provider interconnection facilities” because the “the transmission provider could not place them into its rate base or otherwise earn a return on those upgrades and facilities.”⁴² In support of their concerns, MISO TOs further state that

³⁹ *Id.*

⁴⁰ MISO TOs Rehearing Request at 11-12 (citing *Ameren*, 880 F.3d at 581); Ameren Rehearing Request at 3-5; EEI Rehearing Request at 3-4.

⁴¹ MISO TOs Rehearing Request at 14; Ameren Rehearing Request at 14; EEI Rehearing Request at 6.

⁴² MISO TOs Rehearing Request at 12-13.

“compulsory generator-funded upgrades and facilities raise serious statutory and constitutional concerns” similar to those addressed in *Ameren*, where the D.C. Circuit determined that, “the Commission failed to explain why transmission owners should be forced to add ‘non-profit appendages’ to their transmission system[s].”⁴³

17. If the Commission does not grant rehearing, MISO TOs and Ameren ask the Commission to clarify that the transmission owner may pay interconnection customers for construction costs incurred for the option to build facilities when the interconnection customer transfers them pursuant to article 5.2(9) of the *pro forma* LGIA and then charge the customer a return pursuant to a Facility Service Agreement.⁴⁴ They argue that, without this clarification, the option to build would be contrary to the transmission owner's right to earn a return on facilities that are part of its transmission system.⁴⁵

b. Determination

18. We deny MISO TOs', EEI's, and Ameren's requests for rehearing. We find that the concerns identified in *Ameren* pertain solely to unique features of MISO's tariff and precedent that applies in MISO. As such, the *Ameren* decision does not implicate the Commission's revisions to the *pro forma* LGIP and the *pro forma* LGIA as outlined in Order No. 845. Specifically, the D.C. Circuit recognized in *Ameren* that, under MISO's transmission owner initial funding option, a MISO transmission owner can levy a

⁴³ *Id.* at 13 (citing *Ameren*, 880 F.3d at 584).

⁴⁴ *Id.* at 14-15; Ameren Rehearing Request at 12-13.

⁴⁵ Ameren Rehearing Request at 13.

network upgrade charge on interconnection customers after the transmission owner initially finances a network upgrade. The D.C. Circuit recognized that this network charge, which is memorialized in a Facilities Services Agreement, is “paid [by] the incoming generator” and “includes *both* a return *of* capital . . . and a return *on* capital” and “is thus economically equivalent to inclusion in the rate base.”⁴⁶ We note that the network upgrade charge and Facilities Services Agreement are unique features of MISO’s policy for recovering the cost of network upgrades, and the D.C. Circuit’s primary concern was with the Commission’s requirement that there be mutual agreement between the MISO transmission owner and the interconnection customer before the MISO transmission owner can elect MISO’s transmission owner initial funding option. The D.C. Circuit found that, if the MISO transmission owner must obtain the interconnection customer’s agreement to initially fund network upgrades, then the interconnection customer could effectively prevent the MISO transmission owner from assessing a network upgrade charge and receiving a return on its investment.⁴⁷

19. Order No. 845 creates no such concerns. In reaching this conclusion, we first note that the Commission adopted the option to build in Order No. 2003 as part of the *pro forma* LGIA and that it did so in conjunction with the establishment of the Order

⁴⁶ *Ameren*, 880 F.3d at 576.

⁴⁷ *Id.* at 580-81 (stating, among other things, that “FERC must explain how investors could be expected to underwrite the prospect of potentially large non-profits appendages with no incremental return” and that “the answer FERC offered—to cajole consent from the generators^l—is a *non sequitur*”).

No. 2003 crediting policy. Viewing the option to build in this context, we find that Order No. 845 does not deprive transmission providers of the ability to earn a return of, and on, network upgrades, including stand alone network upgrades constructed pursuant to the option to build as outlined in the *pro forma* LGIA. On the contrary, Order No. 2003 established the Order No. 2003 crediting policy, a mechanism that explicitly allows transmission providers to earn a return of, and on, the costs of network upgrades. To this end, under the Commission's policy as outlined in Order No. 2003, a transmission provider has the ability to earn a return *of* capital expenditure for network upgrades to the extent that it has reimbursed an interconnection customer with transmission credits.⁴⁸ Additionally, when the transmission provider includes in its rate base the cost of a network upgrade, the transmission provider earns a return *on* the costs of this facility.

20. In contrast to the option to build set forth in the *pro forma* LGIA, the concerns the D.C. Circuit identified in *Ameren* are present only in MISO because MISO's interconnection pricing policy is a unique variation from the Order No. 2003 crediting policy under which MISO directly assigns 90 or 100 percent of the network upgrade cost responsibility to interconnection customers. Commission precedent makes clear that, for variations from the Commission's *pro forma* provisions, it is the transmission provider

⁴⁸ Order No. 2003-A, 106 FERC ¶ 61,220 at P 657 (finding that a transmission provider "cannot include the cost of the [interconnection customer-funded] Network Upgrades in its transmission rates until it has provided credits to the Interconnection Customer, and as long as any part of the Network Upgrades remains the responsibility of the Interconnection Customer, that *part* of the cost cannot be recovered in transmission rates"). This is true for all network upgrades, including stand alone network upgrades.

that has the burden to demonstrate that it qualifies for the variation.⁴⁹ Thus, we find that the Commission's Order No. 845 option to build revisions, which do not alter the Order No. 2003 crediting policy, do not conflict with the *Ameren* decision because they do not deprive transmission owners of the ability to earn a return on, and of, stand alone network upgrade costs.⁵⁰

21. Finally, we deny MISO's and Ameren's requests for clarification that the transmission owner may pay the interconnection customer for its option to build construction costs when the interconnection customer transfers the facilities to the transmission owner, and then charge the interconnection customer a return pursuant to a Facilities Services Agreement.⁵¹ We deny these requests because they are essentially requests for the Commission to allow MISO to deviate from the requirements outlined in Order No. 845 based on MISO's interconnection pricing policy, which is itself a deviation from Order No 2003. If MISO wishes to make such a request, it should do so

⁴⁹ See *S. Cal. Edison Co.*, 141 FERC ¶ 61,100, at P 23 (2012) ("A transmission provider seeking a case-specific deviation from a *pro forma* interconnection agreement bears the burden of justifying and explaining what makes the interconnection unique and what operational concerns or other reasons necessitate the variations."); see also *PJM Interconnection, L.L.C.*, 111 FERC ¶ 61,098, at P 9 (2005).

⁵⁰ Only the transmission provider's interconnection facilities and stand alone network upgrades, as opposed to all network upgrades, are relevant in the option to build discussion.

⁵¹ MISO TOs Rehearing Request at 14-15; Ameren Rehearing Request at 12-13.

when it submits its Order No. 845 compliance filing, and the Commission will consider it then.⁵²

2. Justification for the Option to Build Requirements

22. In Order No. 845, the Commission stated that the revisions it adopted to 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.”⁵³ The Commission also found that “limiting exercise of the option to build to circumstances where the transmission provider cannot meet the interconnection customer’s requested dates is not just and reasonable.”⁵⁴ In support of this conclusion, the Commission stated that this limitation “restrict[ed] an interconnection customer’s ability to efficiently build the transmission provider’s interconnection facilities and stand alone network upgrades in a cost-effective manner, which could result in higher costs for interconnection customers.”⁵⁵ Furthermore, the Commission stated that “in circumstances where an interconnection customer cannot exercise the option to

⁵² We note that, in response to a similar request from MISO about how the requirements of Order No. 845 apply to MISO’s specific interconnection process, the Commission stated that it will evaluate each transmission provider’s tariff provisions at the time that it submits its compliance filing. Order No. 845, 163 FERC ¶ 61,043 at P 204.

⁵³ *Id.* P 85.

⁵⁴ *Id.*

⁵⁵ *Id.*

build, it may pay more and/or wait longer for the construction of the transmission provider's interconnection facilities and stand alone network upgrades.”⁵⁶

a. Requests for Rehearing and Clarification

23. Multiple entities argue that the Order No. 845 revisions to the option to build fail to satisfy the legal requirements of Federal Power Act (FPA) section 206.⁵⁷ Ameren and MISO TOs argue that the Commission failed to make a showing of undue discrimination or harm arising from the current *pro forma* LGIA or the option to build provisions under MISO's tariff.⁵⁸ MISO TOs further argue that this lack of undue discrimination is especially “true in [regional transmission operators or independent system operators (RTOs/ISOs)] where the interconnection process is administered by an independent entity.”⁵⁹

24. Additionally, MISO TOs state that interconnection customers in non-RTOs/ISOs generally receive transmission credits to reimburse them for any network upgrades they fund upfront⁶⁰ and that, in a RTO/ISO, an interconnection customer receives transmission rights or other rights in connection with the upgrades they fund.⁶¹ MISO TOs argue that

⁵⁶ *Id.* P 86.

⁵⁷ 16 U.S.C. 824e (2012).

⁵⁸ Ameren Rehearing Request at 7; MISO TOs Rehearing Request at 7.

⁵⁹ MISO TOs Rehearing Request at 7-8.

⁶⁰ *Id.* at 9.

⁶¹ *Id.*

these factors provide “a level of cost protection to interconnection customers, and may leave them ultimately indifferent as to costs.”⁶² SoCal Edison argues that, without oversight for costs incurred, interconnection customers have no incentive to prevent overspending to accelerate construction.⁶³

25. Ameren and EEI argue that the Commission failed to demonstrate that the existing option to build provisions are not just and reasonable.⁶⁴ EEI contends that simply because an interconnection customer may build more cheaply and quickly does not mean that charges associated with facilities built by the transmission provider are unjust and unreasonable.⁶⁵

26. EEI further argues that the prior option to build provisions “ensure that the Transmission Provider would be responsive to the Interconnection Customer’s requested dates and provided an option . . . if the Transmission Provider was not responsive.”⁶⁶ EEI goes on to argue that Order No. 845 is unjust and unreasonable because, as more

⁶² *Id.*

⁶³ SoCal Edison Request for Clarification at 3. Under the California Independent System Operator Corporation (CAISO) tariff, there is a limit on refunds of \$60,000/MW for the cost of Reliability Network Upgrades, but below that threshold, SoCal Edison does not see any cost containment incentive or mechanism to review costs. CAISO Tariff, Appendix DD, Section 14.3.2.1(1); *see also* Southern Rehearing Request at 7.

⁶⁴ Ameren Rehearing Request at 7; EEI Rehearing Request at 3.

⁶⁵ EEI Rehearing Request at 5 & 7.

⁶⁶ *Id.* at 7.

interconnection customers exercise the option the build, the transmission provider's ability to make decisions about its own assets or the location of the assets will "progressively decline."⁶⁷

27. EEI, MISO TOs, and Ameren also assert that Order No. 845 only cites one example where cost and time savings have occurred.⁶⁸ MISO TOs contend that the Commission failed to explain why this example justifies the "across-the-board determination that all existing option to build provisions are not just and reasonable."⁶⁹ Southern argues that "merely suggesting that changes can occur" does not provide "substantial evidence" of the need for the new Order No. 845 option to build requirements.⁷⁰

28. SoCal Edison seeks clarification regarding the Order No. 845 option to build revisions.⁷¹ Specifically, it argues that the Commission fails to address the cost risk to

⁶⁷ *Id.*

⁶⁸ MISO TOs Rehearing Request at 9 (citing Order No. 845, 163 FERC ¶ 61,043 at P 86); Ameren Rehearing Request at 8.

⁶⁹ MISO TOs Rehearing Request at 9.

⁷⁰ Southern Rehearing Request at 7 (citing *Nat. Fuel Gas Supply Corp. v. Fed. Energy Reg. Comm'n*, 468 F.3d 831, 839 (D.C. Cir. 2006); *Motor Vehicle Mfrs. Assoc. of the U.S. v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983) (*Motor Vehicle Mfrs.*); *Allentown Mack Sales & Serv., Inc. v. Nat. Labor Relations Bd.*, 522 U.S. 359, 374 (1998)).

⁷¹ SoCal Edison Request for Clarification at 2.

California ratepayers under the CAISO tariff, which requires that transmission customers, not third party builders or interconnection customers, ultimately bear network upgrade costs.⁷² SoCal Edison states that, under the CAISO tariff, the transmission provider would reimburse the interconnection customer over five years for the amount the interconnection customer spent on the stand alone network upgrades.⁷³ SoCal Edison states, however, that the LGIA does not include a mechanism for ratepayers to challenge the justness and reasonableness of the construction costs that the interconnection customer incurred.⁷⁴ For these reasons, SoCal Edison requests that the Commission clarify whether it intended these new rules to apply in instances when the interconnecting customer does not ultimately bear the costs of its construction for network upgrades.⁷⁵ Further, SoCal Edison requests that the Commission clarify that it would not prohibit the transmission provider from simply putting the interconnection customer's costs into rates per the CAISO tariff.⁷⁶

b. Determination

29. We deny Ameren's, MISO TOs', SoCal Edison's, EEI's, and Southern's rehearing requests. First, in response to Ameren's and MISO TOs' claims that the Commission

⁷² *Id.* at 3.

⁷³ *Id.* (citing CAISO Tariff, Appendix U, Section 3.4.3).

⁷⁴ *Id.*

⁷⁵ *Id.* at 4.

⁷⁶ *Id.*

failed to make a showing of undue discrimination, we note that the Commission did not argue that the Order No. 845 option to build provisions are necessary to address undue discrimination in the pre-Order No. 845 option to build process. Rather, the Commission justified changes to the option to build by stating that the pre-Order No. 845 option to build provisions are not just and reasonable because they restrict “an interconnection customer’s ability to efficiently build the transmission provider’s interconnection facilities and stand alone network upgrades in a cost-effective manner, which could result in higher costs for interconnection customers.”⁷⁷ In addition, the Commission found that the pre-Order No. 845 option to build provisions could prevent interconnection customers from reducing construction times.⁷⁸

30. We also disagree with MISO TOs’ and SoCal Edison’s assertions that interconnection customers that receive transmission credits, transmission rights, or other rights in connection with network upgrades have no economic incentive to reduce network upgrade costs. Although under Order No. 2003 interconnection customers that fund the costs of network upgrades receive network upgrade cost reimbursement through crediting of all their network upgrade costs, interconnection customers still are generally responsible for financing all of their construction costs up front and compete with other developers to meet the substantial requirements to obtain such financing. The need to

⁷⁷ Order No. 845, 163 FERC ¶ 61,043 at P 85.

⁷⁸ *See id.* P 86 (finding that where “an interconnection customer cannot exercise the option to build, it may . . . wait longer for the construction of transmission provider’s interconnection facilities and stand alone network upgrades”).

obtain financing up front and the fact that interconnection customers can wait for years for full reimbursement of their network upgrade costs create an incentive for interconnection customers to keep overall project costs low. Additionally, interconnection customers have emphasized to the Commission that certainty and the ability to control risks are necessary to successfully develop generation.⁷⁹ The option to build revisions increase certainty and the ability to control risks by providing interconnection customers with greater control over their up-front construction costs and schedule.

31. These facts support the Commission's conclusion that interconnection customers have incentives to reduce network upgrade costs. In addition, we believe that a transmission provider's incentives to reduce network upgrade costs may not be as significant as an interconnection customer's incentives to reduce such costs. In support of this conclusion, we note that, under the Order No. 2003 crediting policy, where a transmission provider reimburses the interconnection customer for the network upgrade costs, it does so over time through credits rather than funding the costs up front. Moreover, unlike an interconnection customer, a transmission owner is allowed to recover the cost of a transmission credit in its rate base as it reimburses the

⁷⁹ See, e.g., 2015 AWEA Petition at 4 (“[t]he key reforms requested in the [AWEA petition] relate to the certainty of . . . the interconnection process” and include reforms for “creating more certainty *on network upgrade costs*”) & 8 (“typically the part of the project development process with the greatest uncertainty and risk of delay for developers and the area in which developers often have the fewest opportunities to manage and control . . . risks”) (emphasis added).

interconnection customer. By doing so, the transmission provider, unlike the interconnection customer, will be able to earn a return on its cost for providing the transmission credit. Furthermore, although an interconnection customer receives a transmission credit reimbursement for any stand alone network upgrades it pays for upfront, interconnection customers do not receive any form of reimbursement for the costs of the transmission provider's interconnection facilities. Thus, an interconnection customer has an even greater incentive to reduce costs for the transmission provider's interconnection facilities.

32. In response to Ameren's and EEI's contention that the Commission provided insufficient evidence for concluding that the pre-Order No. 845 option to build was unjust and unreasonable, we note the Commission's reliance upon the reasonable economic proposition that interconnection customers would have a significant economic incentive to build the transmission provider's interconnection facilities and stand alone network upgrades in a cost-effective manner.⁸⁰ We reiterate the finding that "in circumstances where an interconnection customer cannot exercise the option to build, it may pay more and/or wait longer for the construction of the transmission provider's interconnection

⁸⁰ See *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41, 65 (D.C. Cir. 2014) (stating that to meet the FPA section 206 requirements, the Commission must support its findings by "substantial evidence," not "empirical evidence" and that its findings need only be based upon "reasonable economic propositions"); see also *Pub. Serv. Co. of Colo.*, 163 FERC ¶ 61,204, at P 31 (2018) (finding that applying this standard requires "evidence that 'a reasonable mind might accept' as 'adequate to support a conclusion' and that the Commission's findings may be based on "reasonable economic propositions" and "predictive judgments grounded in basic economic principles").

facilities and stand alone network upgrades.”⁸¹ Additionally, we continue to find that the pre-Order No. 845 option to build provisions were unjust and unreasonable for creating a hurdle that could prevent interconnection customers from reducing their costs and shortening their construction timelines. For these reasons, we disagree with EEI’s, MISO TOs’, and Ameren’s claims that the Commission relied solely on a single example of time and cost savings.

33. Finally, we grant SoCal Edison’s request and clarify that the Order No. 845 option to build provisions apply to all public utility transmission providers, including those that reimburse the interconnection customer for network upgrades. In Order No. 845, the Commission’s option to build revisions only eliminated the limitation that prevents interconnection customers from exercising the option to build transmission provider’s interconnection facilities and stand alone network upgrades unless the transmission provider informs the interconnection customer that it cannot meet dates proposed by the interconnection customer.⁸² Order No. 845 made no other modifications relating to the treatment of stand alone network upgrades; nor did it alter the Order No. 2003 crediting policy, which provides a mechanism for an interconnection customer to receive transmission credits in reimbursement for the total amount that the interconnection customer pays for network upgrades, including stand alone network upgrades. Thus, as

⁸¹ Order No. 845, 163 FERC ¶ 61,043 at P 86.

⁸² *Id.* P 3.

noted above, pursuant to the Order No. 2003 crediting policy, the transmission provider can recover the costs of such credits in their transmission rate base after it provides the credits to the interconnection customer.⁸³ Moreover, as noted above, the Commission relied on the reasonable economic proposition that interconnection customers have a greater economic incentive than transmission providers to reduce the cost of stand alone network upgrades.

3. FPA Section 203 Blanket Authorization for Transfer of Facilities from Interconnection Customer to Transmission Provider

34. Article 5.2(9) of the *pro forma* LGIA, which Order No. 845 did not modify, states that “[u]nless Parties otherwise agree, Interconnection Customer shall transfer ownership of Transmission Provider’s Interconnection Facilities and Stand Alone Network Upgrades to Transmission Provider.” Eversource Energy Service Company (Eversource) submitted comments in response to the NOPR asking the Commission to grant a blanket authorization under FPA section 203⁸⁴ for the transfer of transmission provider’s interconnection facilities and/or stand alone network upgrades constructed pursuant to the option to build.⁸⁵ Eversource argued, among other things, that where electricity flows over transmission facilities in interstate commerce, such “facilities are considered to be [Commission-jurisdictional], even if not otherwise in service” and that the regulatory

⁸³ See Order No. 2003-A, 106 FERC ¶ 61,220 at P 657.

⁸⁴ 16 U.S.C. 824b.

⁸⁵ Eversource 2017 Comments at 17-19 (citing 18 CFR 33.1).

approval required by FPA section 203 is “an additional undertaking . . . that would not occur but for the interconnection customer’s construction of the transmission owner’s transmission facilities.”⁸⁶ In Order No. 845, the Commission did not address this request for a blanket authorization.

a. Requests for Rehearing and Clarification

35. EEI and MISO TOs ask the Commission to grant the request originally made in Eversource’s NOPR comments for a FPA section 203 blanket authorization for facilities built pursuant to the option to build if the Commission decides to retain the Order No. 845 revisions to the option to build.⁸⁷ In support, EEI states that the Commission provided no reasoning for not granting such a blanket authorization and that the required transfer, coupled with a “likely increase” in the need for such transfers, weighs in favor of “decreasing the regulatory burden” on transmission providers and interconnection customers.⁸⁸ EEI argues that, like other FPA section 203 blanket authorizations, such transactions would not raise concerns under the Commission’s traditional analysis.⁸⁹ EEI further argues that failure to create such a blanket authorization would require transmission owners to either accept ownership prior to

⁸⁶ *Id.* at 18.

⁸⁷ EEI Rehearing Request at 8; MISO TOs Rehearing Request at 15.

⁸⁸ EEI Rehearing Request at 8 & n.23.

⁸⁹ *Id.* at 8.

energization or face the task of making an FPA section 203 filing prior to transfer.⁹⁰ EEI argues that such issues could delay the transfer of these facilities and cause other complications in the operability of assets where generating assets have obligations to come online on a certain timetable. EEI argues that a blanket authorization would increase the likelihood of timely transfer after the facilities are tested and determined to be safe to operate as part of the transmission system.⁹¹ Finally, EEI argues that granting such a blanket authorization is consistent with the goal of reducing the regulatory burden of FPA sections 203 and 205.

36. MISO TOs argue that FPA section 203 approval is “sometimes a significant undertaking” and that the Commission should therefore grant this request for blanket authorization.⁹² MISO TOs argue that Eversource raised this issue in comments on the NOPR and that failure to respond to this argument would demonstrate that Order No. 845 is arbitrary and capricious.

b. Determination

37. We deny MISO TOs’ and EEI’s requests for rehearing. The Commission has established, in its regulations, a number of blanket authorizations that apply to transactions for which specific approval under FPA section 203 would otherwise be

⁹⁰ *Id.* at 9.

⁹¹ *Id.*

⁹² MISO TOs Rehearing Request at 16.

necessary. A transaction covered by a blanket authorization is “pre-approved” pursuant to the regulation itself rather than requiring an application and specific finding under FPA section 203 that the transaction is consistent with the public interest. Blanket authorizations “under section 203 cannot be granted lightly, particularly generic authorizations.”⁹³ Because a blanket authorization is “an *ex ante* determination as to the appropriateness of a category of transactions under section 203 and a counterparty is not yet identified, a blanket authorization can be granted only when the Commission can be assured that the statutory standards will be met, including ensuring that the interests of captive customers are safeguarded and that public utility assets are protected under all circumstances.”⁹⁴ The limited hypothetical facts MISO TOs and EEI provide in their rehearing requests regarding facilities constructed pursuant to the option to build do not provide the assurance that such transactions will meet these statutory standards. Thus, we deny rehearing.

4. Requirements Related to Reliability, CIP Standards, Liability, Security, and Posting of Standards and Specifications

38. Order No. 845 made no revisions to article 5.2 of the *pro forma* LGIA, which lays out the general conditions for exercising the option to build. Article 5.2 (1) of the *pro forma* LGIA provides that the interconnection customer “shall engineer, procure equipment, and construct Transmission Provider’s Interconnection Facilities and Stand

⁹³ *FPA Section 203 Supplemental Policy Statement*, 120 FERC ¶ 61,060, at P 33. (2007), *order on clarification and reconsideration*, 122 FERC ¶ 61,157 (2008).

⁹⁴ *Id.*

Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by Transmission Provider.”

Article 5.2(2) of the *pro forma* LGIA requires that the interconnection customer’s “engineering, procurement and construction . . . comply with all requirements of law to which Transmission Provider would be subject.”

39. Article 5.2(7) of the *pro forma* LGIA requires that the interconnection customer “indemnify Transmission Provider for claims arising from Interconnection Customer’s construction . . . under the procedures applicable to Article 18.1 Indemnity.” In response to Edison Electric Institute’s, National Grid’s, and Xcel Energy Services, Inc.’s comments on the NOPR taking issue with article 5.2(7) in light of the changes made in Order No. 845, the Commission reiterated the language in this provision and stated that this provision is “sufficiently broad to address EEI’s, Xcel’s, and National Grid’s concerns.”⁹⁵

a. Requests for Rehearing and Clarification

40. EEI and MISO TOs argue that the Commission’s Order No. 845 revisions to the option to build do not address how the changes will impact transmission providers’ ability to maintain system reliability.⁹⁶ MISO TOs state that the Commission’s revisions to the option to build may substantially increase the number of instances when the option

⁹⁵ Order No. 845, 163 FERC ¶ 61,043 at P 94.

⁹⁶ EEI Rehearing Request at 3; MISO TOs Rehearing Request at 17.

to build is elected in, for example, RTOs/ISOs with large generation interconnection queues such as MISO.⁹⁷

41. APS argues that the option to build, as revised by Order No. 845, conflicts with the Critical Infrastructure Protection Reliability Standards (CIP standards). In explanation, APS states that the existing CIP standards require that transmission providers meet specific security and access requirements, which increase as the impact classification increases (from low to high). APS argues that the assets to which interconnection customers would interconnect would be subject to at least one CIP standard and that, while a transmission provider would have “continued responsibility to meet [its] compliance and security obligations . . . under the . . . [r]eliability [s]tandards,” an interconnection customer “may not be similarly obligated.”⁹⁸ APS draws this conclusion because, it argues, although the *pro forma* LGIA requires interconnection customers to comply with “applicable Reliability Standards for procurement, engineering, and construction” under the option to build, it addresses neither the reliability standards related to security nor transmission provider obligations related to the existing transmission assets within which the interconnection customer would build.⁹⁹ APS contends that requiring transmission providers to manage CIP standard compliance

⁹⁷ MISO TOs Rehearing Request at 17-18.

⁹⁸ APS Rehearing Request at 8-9.

⁹⁹ *Id.* at 9 (citing *pro forma* LGIA Art. 5.1).

for interconnection customers would already be “extremely challenging” and “[was] rendered impossible” by the Commission’s rejection of requests to require transmission provider approval for the interconnection customers’ subcontractors.¹⁰⁰ If the Commission does not grant rehearing, APS asks the Commission to limit option to build construction activities so that they do not include “those facilities to which the [CIP standards] are applicable, e.g., outside the substation perimeter.”¹⁰¹

42. APS also states that the current *pro forma* LGIA liability and indemnification provisions are insufficient to protect transmission providers that may violate their regulatory requirements as a result of the expanded option to build. In particular, APS states that *pro forma* LGIA articles 5.1 and 18.1 do not explicitly address the need for interconnection customers to cooperate with, and adhere to, transmission provider processes to facilitate compliance with North American Electric Reliability Corporation (NERC) reliability standards.¹⁰² APS also contends that article 18.2 specifically excludes either party from liability that results from “any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages.”¹⁰³ APS contends,

¹⁰⁰ *Id.* (citing Order No. 845, 163 FERC ¶ 61,043 at P 110).

¹⁰¹ *Id.* at 10.

¹⁰² *Id.* at 11.

¹⁰³ *Id.* at 11. *Pro forma* LGIA Article 18.2 states that:

Other than the Liquidated Damages heretofore described, in no event shall either Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental,

however, that such damages are the types from which transmission providers need to protect themselves to ensure that the appropriate party will be responsible for penalties, required mitigation efforts, and other costs. In light of its interpretation of article 18.2, APS questions who would be liable for “direct facility damage” and “increased costs for the service of load and/or wholesale customers” if “during the course of construction, a significant error is made by the Interconnection Customer or its contractor, which . . . results in the loss or destruction of a portion of the Transmission Provider’s facilities or equipment.”¹⁰⁴ For all these reasons, APS asserts that the Commission should withdraw the option to build reform unless it proposes additional revisions that reduce the administrative burden on transmission providers.¹⁰⁵

43. EEI also asserts that the Commission erred in deciding that interconnection customers exercising the option to build no longer need to post security. EEI argues that the Commission’s determination that “there would be no need for the interconnection customer to provide security . . . for facilities the transmission provider will not

consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

¹⁰⁴ *Id.* at 12.

¹⁰⁵ *Id.* at 12.

construct” fails to consider scenarios where the interconnection customer is unable to complete the project and the transmission provider must do so.¹⁰⁶ For these reasons, EEI argues that interconnection customers should have to post security for the project at the transmission provider’s cost estimate.¹⁰⁷

44. Generation Developers request rehearing of the Commission’s decision not to require that transmission providers post the “standards and specifications” required by article 5.2 of the *pro forma* LGIA for the transmission provider’s interconnection facilities and stand alone network upgrades on their websites.¹⁰⁸ They reason that interconnection customers cannot decide whether to exercise the option to build without this information and that requiring the posting of this information will fulfill the requirement to provide such information “in advance.”¹⁰⁹ Generation Developers also argue that transmission providers already have these standards and specifications “[s]o far as Generation Developers are aware.”¹¹⁰ In addition, Generation Developers argue that granting this request would enhance transparency and certainty.

¹⁰⁶ EEI Rehearing Request at 12-13.

¹⁰⁷ *Id.* at 13.

¹⁰⁸ Generation Developers Rehearing Request at 3.

¹⁰⁹ *Id.* at 4.

¹¹⁰ *Id.*

45. MISO TOs argue that “[w]ith the potential increase in elections of the option to build, coordination and balkanization are real concerns.”¹¹¹ Even with the safeguards provided by article 5.2(1) of the *pro forma* LGIA, MISO TOs argue that transmission providers will have the burdensome and costly responsibilities of developing sufficiently detailed standards and the responsibility of monitoring and policing the interconnection customer' equipment procurement and construction activities. MISO TOs further state that Order No. 845 does not address the need for coordination among multiple interconnection customers, contractors, or other third parties.¹¹²

b. Determination

46. We deny rehearing as to the arguments from EEI and MISO TOs that the Commission did not adequately address concerns about reliability related to the expanded option to build. In response to similar arguments made in comments to the NOPR, in Order No. 845, the Commission found that concerns that the option to build will compromise system reliability are misplaced because they ignore the safeguards for reliability already in place for the existing option to build.¹¹³ In particular, the Commission stated that such “vague reliability concerns about the option to build are misplaced and that articles 5.2.1, 5.2.3, 5.2.5, and 5.2.6 of the *pro forma* LGIA are

¹¹¹ MISO TOs Rehearing Request at 19.

¹¹² *Id.* at 20.

¹¹³ Order No. 845, 163 FERC ¶ 61,043 at P 91.

sufficient to guarantee the reliability of the facilities in question.”¹¹⁴ We again find that the safeguards embodied in article 5.2 of the *pro forma* LGIA are adequate.

47. We deny APS’s request for rehearing regarding the potential for violations of CIP standards. *Pro forma* LGIA article 5.2(1) requires that interconnection customers “engineer, procure equipment, and construct” interconnection facilities and network upgrades using good utility practice and using standards and specifications provided in advance by the transmission provider. We clarify that such standards and specifications under *pro forma* LGIA article 5.2(1) would apply to any necessary contractor access to existing facilities while the interconnection customer exercises the option to build. In addition, Order No. 845 acknowledges that the transmission owner has the option of maintaining a list of contractors available to interconnection customers for the option to build.¹¹⁵ Accordingly, APS can, if it elects, maintain and make available a list of contractors for the interconnection customer to use for the option to build, thus ensuring that contractors used by the interconnection customer can access existing facilities in accordance with the relevant CIP standards. Furthermore, article 5.2(5) gives transmission providers “unrestricted access to Transmission Provider’s Interconnection Facilities and Stand Alone Network Upgrades.” We read these provisions in combination to give transmission providers the security and access necessary to ensure that interconnection customers exercise the option to build in accordance with applicable CIP

¹¹⁴ *Id.* (citing Order No. 2003-A, 106 FERC ¶ 61,220 at P 232).

¹¹⁵ *Id.* P 110.

standards. Therefore, there is no additional need to give transmission providers the ability to approve subcontractors or to further limit the transmission provider's interconnection facilities and stand alone network upgrades for which the interconnection customer may exercise the option to build.

47. We also deny APS's request for rehearing regarding its liability and indemnity concerns, which appears to reflect a misunderstanding of the relationship between the *pro forma* LGIA's indemnification and consequential damages provisions. In Order No. 2003 and its progeny, the Commission explained its reasoning for adopting these provisions and how they relate to one another. To improve clarity, we further explain this reasoning below.

48. In Order No. 2003, the Commission observed that indemnification is defined as "compensating another for a loss suffered due a third party's act of Default."¹¹⁶ The Commission also stated that "interconnection presents a greater risk of liability than exists for the provision of transmission service."¹¹⁷ For this reason, article 18.1 (Indemnity)¹¹⁸ requires that "the interconnecting generator and the transmission provider

¹¹⁶ Order No. 2003, 104 FERC ¶ 61,103 at P 630 (citing Black's Law Dictionary 772 (7th ed. 1999)).

¹¹⁷ *Id.* P 636.

¹¹⁸ *Pro forma* LGIA Art. 18.1 reads:

Indemnity. The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage

each indemnifies the other from all damages to *third parties* arising under the LGIA.”¹¹⁹

Article 18.1 “provide[s] protection for acts of ordinary negligence, but not for acts of gross negligence or intentional wrongdoing.”¹²⁰

49. Additionally, as noted in Order No. 845,¹²¹ Order No. 2003 created safeguards in *pro forma* LGIA article 5.2 to protect transmission providers when an interconnection customer exercises the option to build. One such safeguard, in *pro forma* LGIA article 5.2(7), is a requirement that the interconnection customer indemnify the transmission provider for specific aspects related to the option to build.¹²² This provision “applies to

to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this LGIA on behalf of the Indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

¹¹⁹ *Ne. Utils. Serv. Co.*, 111 FERC ¶ 61,333, at P 28 (2005) (emphasis supplied).

¹²⁰ Order No. 2003, 104 FERC ¶ 61,103 at P 636.

¹²¹ Order No. 845, 163 FERC ¶ 61,043 at PP 40 & 91.

¹²² *Pro forma* LGIA Art. 5.2 (7) provides that: “Interconnection Customer shall indemnify Transmission Provider for claims arising from Interconnection Customer's construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity.” While the Commission modified the *pro forma* LGIA in Order No. 845 to allow interconnection customers to exercise the option to build regardless of whether the transmission provider can meet the interconnection customer's proposed in-service date, initial synchronization date, or commercial operation date, it made no other changes to the requirements that the interconnection customer must abide by, include the indemnity provision *pro forma* LGIA article 5.2 (7). *See id.* P 91 (“[i]n this Final Rule, we make no changes to the requirements in article 5.2”).

all work, regardless of the side of the Point of Interconnection on which the work occurs.”¹²³ However, this provision (in contrast to the general language of *pro forma* article 18.1) “protect[s] the *Transmission Provider* from liability arising out of the Interconnection Customer’s exercising its right to build.”¹²⁴ That is, while both article 18.1 and article 5.2(7) pertain to indemnification for third party claims, article 5.2(7) only indemnifies the transmission provider for third party claims arising from the interconnection customer’s construction under the option to build.

50. Order No. 2003 also adopted a no consequential damages provision in *pro forma* LGIA article 18.2 (Consequential Damages).¹²⁵ This provision “protects either Party from liability for any special, indirect, incidental, consequential, or punitive damages, including profit or revenue.”¹²⁶ The interconnection customer and transmission provider, however, “remain liable for . . . any damages for which a Party may be liable to the other Party under another agreement.”¹²⁷

51. In a request for rehearing of Order No. 2003, Central Maine Power Company, New York State Electric & Gas Corporation, and Rochester Gas and Electric Corporation

¹²³ Order No. 2003, 104 FERC ¶ 61,103 at P 638.

¹²⁴ Order No. 2003, 104 FERC ¶ 61,103 at P 357 (emphasis supplied).

¹²⁵ *Supra* n. 104.

¹²⁶ Order. No. 2003, 104 FERC ¶ 61,103 at P 906.

¹²⁷ *Id.*

sought clarity on the relationship between article 18.2 and the *pro forma* LGIA's indemnification provisions. They argued that, because article 18.2 "does not exclude consequential damages which arise as part of [an indemnification] claim," the Commission should "ensure the full implementation" of the *pro forma* LGIA indemnity protections by amending article 18.2 "to exclude consequential damages that arise in conjunction with indemnification."¹²⁸

52. The Commission rejected this request in Order No. 2003-A and stated that "[t]he indemnification of one Party by another must be comprehensive and must include any liability the indemnified Party faces as a result of the indemnifying Party's misdeeds."¹²⁹ It continued, stating that "[w]hile Article 18.2 prevents one Party from seeking consequential damages against another Party, the purpose of the indemnification provisions is different; it protects the Party not at fault from liability to third parties (those who are not Parties to the interconnection agreement)."¹³⁰ The Commission stated that "[r]equiring the indemnifying Party to reimburse the indemnified Party only for, say compensatory damages and not for punitive damages that may be assessed against the indemnified Party would weaken the LGIA's protections and shield the indemnifying

¹²⁸ Central Maine Aug. 25, 2003 Rehearing Request at 4-5 (Docket No. RM02-1-001).

¹²⁹ Order No. 2003-A, 106 FERC ¶ 61,220 at P 455.

¹³⁰ *Id.*

Party from full liability.”¹³¹ Thus, the limitations in article 18.2 (Consequential Damages) apply only to claims by one LGIA party against the other directly, and are not applicable to third party claims under article 18.1 and article 5.2(7) for indemnification for claims.

53. Thus, article 5.2(7) in combination with the *pro forma* LGIA indemnification provisions provide sufficient protection from third party claims against transmission providers for claims arising from the interconnection customer’s construction under the option to build. Additionally, because *pro forma* LGIA articles 5.2(7) and 18.1¹³² address an interconnection customer’s liability to the transmission provider *only* when there is a third-party claim against the transmission provider, these articles do not preclude a transmission provider from making a direct claim against an interconnection customer. In particular, given the extensive safeguards in *pro forma* LGIA article 5.2, the transmission provider may argue that the interconnection customer has breached the interconnection agreement if the interconnection customer fails to abide by any requirement that results in the transmission provider accruing damages, e.g., through harm to the transmission system.¹³³

¹³¹ *Id.*

¹³² We note, however, that, when indemnification is not pursuant to the option to build indemnification in *pro forma* LGIA article 5.2(7), article 18.1 requires that the interconnection customer and the transmission provider indemnify each other. *See Ne. Utils. Serv. Co.*, 111 FERC ¶ 61,333 at P 28.

¹³³ If, however, harm to the transmission provider’s transmission system results

54. Regarding the Commission's statement in Order No. 845 that *pro forma* LGIA article 5.2(7) is "sufficiently broad to address"¹³⁴ the concerns expressed in NOPR comments, we reiterate that the Commission made no changes to *pro forma* article 5.2, including the indemnity provision related to the option to build in article 5.2(7).¹³⁵ Additionally, the Commission did not interpret *pro forma* LGIA article 5.2(7) to expand the terms of the indemnity provisions to include indemnification by the interconnection customer for activities other than the interconnection customer's option to build construction. The Commission did not expand the applicability of this provision for multiple reasons. First, *pro forma* LGIA article 5.2(7) related to the option to build indemnifies the transmission provider for "claims arising from Interconnection Customer's construction," and this language already provides indemnification for the transmission provider for a significant number of third party claims arising from the interconnection customer's option to build construction. Second, as noted above, even if the indemnity provisions do not apply, the transmission provider may pursue a claim for breach if the interconnection customer's conduct pursuant to the option to build breaches the interconnection agreement. Third, *pro forma* LGIA article 5.2 gives the transmission

in the transmission provider's liability to a third party, such as an industrial customer, and such harm to the transmission provider's transmission system arises from the interconnection customer's construction pursuant to the option to build, the transmission provider could invoke the indemnity provisions of the *pro forma* LGIA.

¹³⁴ Order No. 845, 163 FERC ¶ 61,043 at P 94.

¹³⁵ See, e.g., *id.* P 91.

provider “significant oversight authority” over the option to build, which, if exercised properly, gives the transmission provider a significant role in ensuring that the interconnection customer’s exercise of the option to build does not expose the transmission provider to liability.¹³⁶ For example, the transmission provider has the ability to “set[] the specifications governing construction (Article 5.2.1), approve[] the Interconnection [Customer’s] construction plans (Article 5.2.3), . . . an unlimited right of inspection (Article 5.2.3), and . . . the right to require the Interconnection Customer to remedy any deficiencies (Article 5.2.6).”¹³⁷

55. We also deny rehearing as to EEI’s contention that the Commission erred by removing the requirement for the interconnection customer to provide security if the interconnection customer fails to complete any option to build facilities. If such a situation arises and the interconnection customer still wants to move forward with the interconnection request, this situation would re-trigger article 11.5 of the *pro forma* LGIA for “the applicable portion of Transmission Provider’s Interconnection Facilities [and] Network Upgrades,” and the interconnection customer would then have to provide security no later than 30 days prior to the transmission provider recommencing “procurement, installation, or construction of a discrete portion of a Transmission

¹³⁶ *Id.* P 110.

¹³⁷ Order No. 2003-A, 106 FERC ¶ 61,220 at P 232.

Provider's Interconnection Facilities [or] . . . Network Upgrades.”¹³⁸ Thus, there is no need to require other revisions to the *pro forma* LGIA to account for EEI's suggested eventuality. In addition, the occurrence of such a scenario may indicate that the interconnection request is no longer viable, in which case, the transmission provider's interconnection facility or stand alone network upgrade would no longer be necessary.

56. We also deny Generation Developers' request for rehearing of the decision not to require transmission providers to post on their websites the “standards and specifications” for exercising the option to build. Despite Generation Developers' assertions, there is nothing in the record to suggest that the engineering, procurement, and construction standards and specifications applicable to the transmission provider's interconnection facilities and stand alone network upgrades required for a particular interconnection request would be available prior to the submission of a specific interconnection request. In fact, it might be difficult or impossible to provide such information on a website before an interconnection customer submits its interconnection request and the required technical data. Regardless, pursuant to article 5.2(1) of the *pro forma* LGIA, if an interconnection customer has informed the transmission provider of its decision to exercise the option to build, the transmission provider must provide such standards and specifications “in advance” of the interconnection customer “engineer[ing], procur[ing]

¹³⁸ *Pro forma* LGIA Art. 11.5.

equipment, and construct[ing] Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades.”¹³⁹

57. In response to MISO TOs, we find that article 5.2(1) of the *pro forma* LGIA equips the transmission provider with the ability to develop “standards and specifications” to avoid concerns about transmission system “balkanization.” We also note that, as discussed more fully below, the Commission is granting rehearing to allow transmission providers to recover oversight costs as negotiated between the interconnection customer and the transmission provider and memorialized in the LGIA.

58. As to MISO TOs' concerns regarding the lack of guidance about coordination, we note that each interconnection request and each transmission system is unique. The transmission provider and interconnection customer will have an opportunity to work through the relevant details regarding coordination during the negotiation phase of the LGIA. Therefore, we decline to provide detailed instructions to account for a multitude of dissimilar scenarios when transmission providers and interconnection customers are capable of coordinating the option to build process for multiple interconnection requests.

5. Affected Systems

59. The *pro forma* LGIP and *pro forma* LGIA define affected systems as “electric system[s] other than the Transmission Provider's Transmission System that may be affected by the proposed interconnection.”¹⁴⁰ The interconnection system impact study

¹³⁹ *Pro forma* LGIA Art. 5.2(1).

¹⁴⁰ *Pro forma* LGIP Section 1 (Definitions); *Pro forma* LGIA Art. 1 (Definitions).

“evaluates the impact of the proposed interconnection on the safety and reliability of the Transmission Provider’s Transmission System, and, if applicable, an Affected System.”¹⁴¹ Impacts on affected systems may require the construction of network upgrades to address the impacts caused by a particular interconnection request.

a. Requests for Rehearing and Clarification

60. MISO TOs state that the Commission did not address whether the option to build extends to upgrades on affected systems. They also state that the burden created by the option to build revisions will be higher if affected systems must allow interconnection customers that do not interconnect with them directly to construct on their systems.¹⁴²

b. Determination

61. We grant MISO TOs’ request for clarification and clarify that the option to build does not apply to stand alone network upgrades on affected systems. To make our intent clear, we revise the definition of stand alone network upgrade to read (with additions in italics):

Stand Alone Network Upgrades shall mean Network Upgrades *that are not part of an Affected System* 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.¹⁴³

¹⁴¹ *Pro forma* LGIP Section 1 (Definitions); *Pro forma* LGIA Art. 1 (Definitions).

¹⁴² MISO TOs Rehearing Request at 21.

¹⁴³ This revision is the first of two changes to the definition of a stand alone network upgrade in the *pro forma* LGIP and *pro forma* LGIA. The

6. Cluster Studies

62. Clustering is “the process whereby a group of Interconnection Requests is studied together, instead of serially, for the purpose of conducting the Interconnection System Impact Study.”¹⁴⁴ Transmission providers may “allocate the cost of . . . common upgrades for clustered Interconnection Requests without regard to Queue Position.”¹⁴⁵ Transmission providers have the discretion to decide whether to study interconnection requests serially or in clusters.¹⁴⁶

a. Requests for Rehearing and Clarification

63. APS argues that the expanded option to build provisions are incompatible for transmission providers that conduct cluster studies.¹⁴⁷ Specifically, regarding a cluster study that identifies stand alone network upgrades for which multiple interconnection customers are responsible, APS questions which interconnection customer may exercise the option to build. Further, if multiple interconnection customers want to build a stand alone network upgrade, APS asks who decides which interconnection customer has priority to exercise the option to build.¹⁴⁸

additional revision is described in the option to build subsection on stand alone network upgrades (II.A.7).

¹⁴⁴ *Pro forma* LGIA Art. 1 (Definitions).

¹⁴⁵ *Pro forma* LGIP Section 4.1

¹⁴⁶ *Pro forma* LGIP Section 4.2.

¹⁴⁷ APS Rehearing Request at 13.

¹⁴⁸ *Id.*

b. Determination

64. We deny APS's rehearing request on this issue. We disagree that the Order No. 845 option to build revisions are incompatible with a cluster study approach. APS has not pointed to any specific provisions in the *pro forma* LGIA that would preclude customers in a cluster study from exercising the option to build. Moreover, APS has not provided any evidence to indicate that stand alone network upgrades being required by more than one interconnection customer in a cluster will be a common enough occurrence to require *pro forma* LGIA revisions tailored to such a scenario. Additionally, the scenario APS envisions is not tied to the changes adopted in this proceeding because, to the extent that such a circumstance occurs, multiple interconnection customers could have sought to exercise the option to build for the same stand alone network upgrade under the pre-Order No. 845 option to build. However, if a transmission provider that studies interconnection requests in clusters believes this is a concern, it should, on compliance, propose revisions to address how it will process requests by multiple interconnection customers to exercise the option to build for the same stand alone network upgrade.

7. Stand Alone Network Upgrades

65. 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.”¹⁴⁹ 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 LGIA.¹⁵⁰

66. In Order No. 845, the Commission denied Generation Developers’ request for a requirement that transmission providers explain why they do not think a network upgrade is a stand alone network upgrade. The Commission stated that “it would be difficult for a transmission provider” to make this determination “until it is presented with the results of a system impact study.”¹⁵¹

a. Requests for Rehearing and Clarification

67. Generation Developers claim that the Commission erred by not requiring that transmission providers explain their reasoning when they disagree with an interconnection customer about whether a network upgrade is stand alone.¹⁵² They reason that not requiring such an explanation undermines the interconnection customer’s ability to exercise the option to build and increases process opacity.¹⁵³ They also disagree with the Commission that providing such an explanation would be difficult before the transmission provider has the system impact study results, as these results

¹⁴⁹ *Pro forma* LGIP Section 1 (Definitions); *Pro forma* LGIA Art. 1 (Definitions).

¹⁵⁰ *Pro forma* LGIP Section 1 (Definitions); *Pro forma* LGIA Art. 1 (Definitions).

¹⁵¹ Order No. 845, 163 FERC ¶ 61,043 at P 112.

¹⁵² Generation Developers Rehearing Request at 5-6.

¹⁵³ *Id.* at 6.

will be available prior to the LGIA stage of the interconnection process, when the interconnection customer can first express its desire to exercise the option to build.¹⁵⁴ Furthermore, Generation Developers argue that, if there is a disagreement, dispute resolution or a complaint filed pursuant to FPA section 206 are not viable options because these options involve costly delays.¹⁵⁵

b. Determination

68. We grant rehearing and find that the Commission erred by not requiring a transmission provider to explain why it does not consider a particular network upgrade to be a stand alone network upgrade. We recognize that, because of the mutual agreement requirement in the definition of stand alone network upgrade, disagreements may arise regarding whether a network upgrade is a stand alone network upgrade.¹⁵⁶ The Commission, in Order No. 2003, was aware that transmission providers had reliability concerns related to the option to build when the Commission defined stand alone network upgrades to include the mutual agreement requirement.¹⁵⁷ Even though the transmission

¹⁵⁴ *Id.* at 8.

¹⁵⁵ *Id.* at 6-7.

¹⁵⁶ *See Duke Energy Florida, LLC*, 163 FERC ¶ 61,174 (2018) (setting for hearing an LGIA that was filed unexecuted because of disagreement as to whether a network upgrade was stand alone).

¹⁵⁷ *See Order No. 2003*, 104 FERC ¶ 61,103 at PP 341, 356-57 (noting that the transmission provider must retain “adequate control of the engineering and construction of . . . Stand Alone Network Upgrades because of its obligation to protect the safety of the public and maintain the reliability of the Transmission System”).

provider has the ability to disagree when an interconnection customer believes a network upgrade is a stand alone network upgrade, the transmission provider may not unreasonably withhold its agreement because such an outcome would be unjust and unreasonable. That is, the transmission provider must explain why the upgrade in question is not one that an interconnection customer may construct without affecting the transmission system's day-to-day operations during construction. Therefore, we require that, when there is a disagreement, a transmission provider must provide the interconnection customer a written explanation within fifteen days of its determination that outlines the technical reasons why it does not consider a network upgrade to be a stand alone network upgrade. We consider this time period reasonable because it begins at the time of the transmission provider's determination outlining its technical reasons. To effectuate this revised requirement, we revise the definition of stand alone network upgrades in the *pro forma* LGIP and the *pro forma* LGIA to include the following new sentence at the end of the definition (with additions in italics):

Stand Alone Network Upgrades shall mean Network Upgrades *that are not part of an Affected System* 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. *If the Transmission Provider and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Provider must provide the Interconnection Customer a written technical explanation*

*outlining why the Transmission Provider does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.*¹⁵⁸

8. Cost Estimates

69. Section 8.3 of the *pro forma* LGIP provides that transmission providers shall:

use Reasonable Efforts to . . . issue a draft Interconnection Facilities Study report to Interconnection Customer within . . . ninety . . . Calendar Days, with no more than a +/- 20 percent cost estimate contained in the report; or one hundred eighty . . . Calendar Days if the Interconnection Customer requests a +/- 10 percent cost estimate.

a. Requests for Rehearing and Clarification

70. Southern asks the Commission to grant rehearing with regard to Order No. 845's option to build changes, but, if it does not, it asks the Commission to clarify that the requirement in section 8.3 of the *pro forma* LGIP would apply to interconnection customers that construct stand alone network upgrades.¹⁵⁹ Specifically, it points to the requirement that transmission providers must provide an estimated cost that is "plus or minus 10 or 20 percent, depending on the length of the study" to provide some certainty regarding cost exposure to the interconnection customer.¹⁶⁰ Southern argues that interconnection customers exercising the option to build must do the same to provide cost certainty to transmission providers and their native load customers. In particular,

¹⁵⁸ As noted above in the affected systems section (II.A.5), this is the second of two clarifying revisions that we are making to the definition of stand alone network upgrades in the *pro forma* LGIP and *pro forma* LGIA.

¹⁵⁹ Southern Rehearing Request at 9.

¹⁶⁰ *Id.*

Southern argues that the interconnection customer should either be bound by the estimate in the transmission provider's interconnection facilities study report or "should be required to provide an estimate that complies with the plus or minus 10/20 percent cost estimate."¹⁶¹

b. Determination

71. We deny rehearing on this issue. Section 8.3 of the pro forma LGIP only requires the transmission provider to make reasonable efforts during the interconnection study process to estimate costs to construct network upgrades, and the *pro forma* LGIP does not impose any consequences on transmission providers that exceed the estimate or accuracy margin.¹⁶² Southern's request would therefore require the Commission to hold the interconnection customer to a higher standard than it holds the transmission provider. We decline to do so.

9. Oversight Costs

72. In Order No. 845, in response to arguments that "interconnection customers should assume all additional costs that result from exercise of the option to build," the Commission stated that it was making "no changes with regard to cost assignment for

¹⁶¹ *Id.*

¹⁶² See *Duke Energy Fla., LLC*, 165 FERC ¶ 61,230, at P 22 (2018) ("[t]he Commission's precedent is clear that the costs in an LGIA are simply estimates and that interconnection customers are responsible for paying the actual costs of interconnection facilities and network upgrades").

transmission provider's interconnection facilities and stand alone network upgrades.”¹⁶³

Additionally, in response to concerns that transmission providers “will have to expend significant resources to perform oversight functions” for the option to build, the Commission stated that “the Final Rule does not alter the role that the transmission provider would play in overseeing the option to build process.”¹⁶⁴

a. Requests for Rehearing and Clarification

73. Southern argues that, as a result of Order No. 845, transmission providers will increasingly incur costs to provide additional coordination, oversight, and approval of stand alone network upgrade “design, equipment specifications, contractors, construction, and commissioning.”¹⁶⁵ EEI asks the Commission to clarify whether transmission providers can recover such costs associated with overseeing an interconnection customer's construction when the option to build is exercised.¹⁶⁶ Specifically, it asks the Commission to allow transmission providers to recover the costs for “providing the coordination, oversight, and approval required for the Interconnection Customer's construction.”¹⁶⁷ As background, EEI states that, in Order No. 2003-A, the Commission stated that it would “not require the Transmission Provider [to] be reimbursed for

¹⁶³ Order No. 845, 163 FERC ¶ 61,043 at P 95.

¹⁶⁴ *Id.* P 103.

¹⁶⁵ Southern Rehearing Request at 8.

¹⁶⁶ EEI Rehearing Request at 13; *see also* SoCal Edison Rehearing Request at 4.

¹⁶⁷ EEI Rehearing Request at 10.

construction oversight cost,” as the interconnection customer may only exercise the option to build “as a last resort” and that the transmission provider “can avoid the expense[s]” of oversight by meeting the milestones and avoiding the pre-Order No. 845 option to build trigger.¹⁶⁸ EEI argues that, since this reasoning no longer holds true, the Commission should amend article 5.2 of the *pro forma* LGIA to add the following provision: “(12) Transmission Provider shall recover all reasonable costs associated with the review, approval, testing, inspection and transfer of the Interconnection Facilities and Stand Alone Network Upgrades constructed by the Interconnection Customer in accordance with this Article 5.2.”¹⁶⁹

74. In response to the NOPR, SoCal Edison raised concerns regarding the additional costs and oversight that will result from the exercise of the option to build and sought Commission confirmation that the interconnection customer should bear those costs.¹⁷⁰ SoCal Edison argues on rehearing that, despite the Commission’s reliance on its requirement that the interconnection customers and their contractors must use good utility practice, the interconnection customers may have little incentive to rigorously adhere to the transmission provider’s standards and specifications.¹⁷¹

¹⁶⁸ *Id.* at 11-12 (citing Order No. 2003-A, 106 FERC ¶ 61,220 at PP 218-19).

¹⁶⁹ *Id.* at 13.

¹⁷⁰ SoCal Edison Request for Clarification at 4 (referencing SoCal Edison April 13, 2017 Comments at 4-5).

¹⁷¹ *Id.* (citing Order No. 845, 163 FERC ¶ 61,043 at P 111).

b. Determination

75. With regard to oversight costs related to the option to build exercised by interconnection customers for the transmission provider's interconnection facilities and stand alone network upgrades, we grant rehearing. We agree with EEI that the rationale that the Commission provided in Order No. 2003 for disallowing collection of oversight costs (namely, that a transmission provider can avoid such costs by agreeing to meet the interconnect customer's schedule)¹⁷² no longer applies as a result of Order No. 845. For this reason, we revise article 5.2 of the *pro forma* LGIA to include a placeholder for transmission providers to recover the costs of executing the responsibilities enumerated for transmission providers in that same article. We expect the transmission provider and interconnection customer to negotiate this amount and clearly state it in the LGIA. The Commission will add the following language at the end of article 5.2 of the *pro forma* LGIA (with new additions in italics):

(12) If Interconnection Customer exercises the Option to Build pursuant to Article 5.1.3, Interconnection Customer shall pay Transmission Provider the agreed upon amount of [\$ PLACEHOLDER] for Transmission Provider to execute the responsibilities enumerated to Transmission Provider under Article 5.2. Transmission Provider shall invoice Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

¹⁷² Order No. 2003-A, 106 FERC ¶ 61,220 at P 218.

B. Identification and Definition of Contingent Facilities

76. In Order No. 845, the Commission added new section 3.8 to the *pro forma* LGIP, which requires that transmission providers publish a method for identifying contingent facilities¹⁷³ and that they provide a list of potential contingent facilities to interconnection customers at the close of the system impact study phase. Order No. 845 further requires 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 if the transmission provider determines that this information is readily available and not commercially sensitive.

1. Requests for Rehearing and Clarification

77. Generation Developers seek rehearing of the Commission's decision not to exempt interconnection customers from financial responsibility for late-identified contingent facilities.¹⁷⁴ Specifically, Generation Developers state that the Commission did not explain why it is just and reasonable for the interconnection customer to bear unexpected costs in the circumstance where a transmission provider identifies additional contingent facilities after the close of the system impact study phase. Generation Developers add

¹⁷³ 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 the need for restudies of the interconnection request or a reassessment of the interconnection facilities and/or network upgrades and/or costs and timing." Order No. 845, 163 FERC ¶ 61,043 at P 218.

¹⁷⁴ *Id.* P 201.

that Order No. 845 provides no incentive for the transmission provider to accurately identify contingent facilities because it shifts all of the consequences of a failure to timely identify all contingent facilities onto the interconnection customer.¹⁷⁵ Generation Developers ask the Commission to state that the interconnection customer will not be financially responsible if the transmission provider only identifies a new contingent facility after the close of the system impact study phase.¹⁷⁶

2. Determination

78. We deny Generation Developers' rehearing request. To provide increased transparency to interconnection customers regarding the interconnection process, Order No. 845 requires that transmission providers outline a method to identify contingent facilities by the close of the system impact study phase. Thus, the interconnection customer will have notice of any contingent facilities identified by the transmission provider by the close of the system impact study phase. This requirement to identify contingent facilities does not change cost responsibilities. In denying this request, we note that it would be inconsistent with the cost causation principle to exempt an interconnection customer from interconnection facility and network upgrade costs that

¹⁷⁵ Generation Developers Rehearing Request at 11.

¹⁷⁶ *Id.* at 10.

would not be necessary but for that interconnection request.¹⁷⁷ The principle of cost causation generally requires that costs “are to be allocated to those [that] cause the costs to be incurred and reap the resulting benefits.”¹⁷⁸ The Commission did not revisit this principle in Order No. 845, and we decline to do so at this time.

C. Transparency Regarding Study Models and Assumptions

79. 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. These revisions allow transmission providers to require interconnection customers, OASIS site users, and password-protected website users to sign a confidentiality agreement before the release of commercially sensitive information or CEII. The revisions also require that the network model information and underlying assumptions “reasonably represent those used during the most recent interconnection study and be representative of current system conditions.”¹⁷⁹

¹⁷⁷ See Order No. 2003, 104 FERC ¶ 61,103 at P 694 (“it is appropriate for the Interconnection Customer to pay the initial full cost for Interconnection Facilities and Network Upgrades that would not be needed but for the interconnection”).

¹⁷⁸ *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d at 87 (quoting *Nat’l Assoc. of Regulatory Util. Comm’rs v. FERC*, 475 F.3d at 1285).

¹⁷⁹ Order No. 845, 163 FERC ¶ 61,043 at P 236.

1. Protection of Network Model Information

a. Requests for Rehearing and Clarification

80. Non-Profit Utility Trade Associations request that the Commission clarify that its intention is to permit transmission providers “to protect data that would qualify for CEII treatment if [they] were submitted” to the Commission.¹⁸⁰ They note that, under the Commission’s regulations, an entity may submit information to the Commission and request that it be treated as CEII, but this information will not formally be designated as CEII until there is a request to access the information and the Commission has granted CEII status. Non-Profit Utility Trade Associations state that revised section 2.3 of the *pro forma* LGIA implicates a large amount of modeling and assumption information that meets the substantive definition of CEII but that the Commission has not designated such information as CEII. Non-Profit Utility Trade Associations contend that this technicality limits a transmission provider’s ability to protect sensitive data, and they ask the Commission to clarify that information “may be protected under [*pro forma*] LGIP section 2.3 if the Transmission Provider determined that it would meet the substantive criteria for CEII had it been submitted to the Commission for that determination.”¹⁸¹ According to Non-Profit Utility Trade Associations, when there are questions regarding

¹⁸⁰ Non-Profit Utility Trade Associations Rehearing Request at 5.

¹⁸¹ *Id.* at 6.

the transmission provider's judgment, the Commission's complaint procedures should be adequate to provide resolution.¹⁸²

81. Non-Profit Utility Trade Associations also allege that the language of revised section 2.3 of the *pro forma* LGIP is broad enough to allow any entity to obtain network models and underlying assumptions for any reason. Non-Profit Utility Trade Associations further allege that offering a confidentiality agreement to all OASIS site users without further limitation could include unknown entities that pose a security risk. For this reason, Non-Profit Utility Trade Associations ask the Commission to clarify that the Commission intended to permit transmission providers to apply reasonable standards to requests from entities to enter into such confidentiality agreements. Non-Profit Utility Trade Associations suggest that the Commission's CEII regulations could provide a useful framework for standards because they require that requesters provide a name, contact information, and a statement of need. If the request is made on behalf of an organization, the requester must state that it is authorized to make the request on behalf of the organization and that all individuals in the organization will be bound by executed non-disclosure agreements.¹⁸³

82. Non-Profit Utility Trade Associations expect that transmission providers would limit their review to ascertaining that the entity is a recognized industry participant or

¹⁸² *Id.* at 4-6.

¹⁸³ *Id.* at 6-7.

has a legitimate commercial, academic, or governmental interest in accessing the data. Further, Non-Profit Utility Trade Associations contend that the potential for anti-competitive behavior in this review seems limited and manageable through the Commission's complaint procedures or enforcement hotline.¹⁸⁴

83. If the Commission does not grant these clarifications, Non-Profit Utility Trade Associations request rehearing of Order No. 845's revisions to section 2.3 of the *pro forma* LGIP, asserting that the Commission erred in requiring transmission providers to post network models and underlying assumptions without permitting the transmission providers to adequately protect information that may be used to threaten critical infrastructure.¹⁸⁵

b. Determination

84. Order No. 845 did not revise the Commission's existing CEII requirements.¹⁸⁶ As Non-Profit Utility Trade Associations note, information is not CEII unless the Commission has designated it as CEII through its CEII designation process. Accordingly, we deny Non-Profit Utility Trade Associations' request for clarification that transmission providers may designate as CEII information that they believe should

¹⁸⁴ *Id.* at 7.

¹⁸⁵ *Id.* at 7-8.

¹⁸⁶ Under the Commission's CEII regulations, 18 CFR 388.113, an entity may submit information to the Commission requesting that it be treated as CEII. 18 CFR 388.113 (2018).

be treated as such. We also reiterate that neither the Commission's CEII regulations¹⁸⁷ 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.¹⁸⁸

85. We grant Non-Profit Utility Trade Associations' request for clarification that transmission providers may apply reasonable standards to requests to enter into confidentiality agreements before information is released. Specifically, we grant clarification to the extent that Non-Profit Utility Trade Associations 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), they may do so.¹⁸⁹

2. Requirement to Post Network Model Information

a. Requests for Clarification

86. APS asks the Commission to clarify that the requirement that network models and underlying assumptions "reasonably represent those used during the most recent interconnection study and be representative of current system conditions" in revised

¹⁸⁷ Section 388.113 of the Commission's regulations does not govern the transmission provider's handling, sharing, and disseminating of information that the transmission provider submitted for CEII designation, including how it disseminates that information on its OASIS site or password-protected website. *Id.*

¹⁸⁸ Order No. 845, 163 FERC ¶ 61,043 at P 241.

¹⁸⁹ See 18 CFR 388.113(g)(5)(i).

section 2.3 of the *pro forma* LGIP does not require transmission providers to modify the network models and underlying assumptions utilized for evaluating interconnection requests so that they are representative of “current system conditions.”¹⁹⁰ APS also asks the Commission to clarify that such language simply requires that the posted network models and underlying assumptions reasonably represent those anticipated future system conditions that the transmission provider utilizes to evaluate interconnection requests.¹⁹¹

87. APS notes that there are often significant differences between “current system conditions” and those conditions utilized in the base cases and models to evaluate interconnection requests. More specifically, APS states that current system conditions would not include those facilities, equipment, configurations, relay settings, etc., unless they are built and operating. Conversely, APS states that “models and base case data utilized to evaluate Interconnection Request[s] incorporate planned, future facilities, equipment, configurations, relay settings, etc.”¹⁹² For this reason, APS argues that the network models and underlying assumptions utilized to evaluate interconnection requests will, and should, always differ from those models and assumption utilized to “approximate or evaluate ‘current system conditions,’ which do not, and should not,

¹⁹⁰ APS Rehearing Request at 17.

¹⁹¹ *Id.*

¹⁹² *Id.*

incorporate, or rely upon, planned, future facilities, equipment, configurations, [and] relay settings.”¹⁹³

b. Determination

88. We grant APS’ request for clarification. In Order No. 845, the Commission did not require that transmission providers modify the network models and the underlying assumptions used in interconnection studies. Rather, the purpose of the revisions to section 2.3 of the *pro forma* LGIP is to make transparent the base case data, network models, and underlying assumptions that transmission providers use to conduct interconnection studies. Therefore, we clarify 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.

D. Congestion and Curtailment Information

89. In the NOPR, the Commission proposed to require that transmission providers post congestion and curtailment information in one location on their OASIS sites so that interconnection customers could more easily access information that may aid in their decision making.¹⁹⁴ In Order No. 845, however, the Commission declined to adopt this proposal after considering the comments on the NOPR. The Commission stated that it

¹⁹³ *Id.*

¹⁹⁴ Order No. 845, 163 FERC ¶ 61,043 at P 247.

found “persuasive those comments that assert that, in some instances, generating information on the causes of congestion or on unit-specific or constraint-specific curtailment information is technically infeasible or would require significant additional effort.”¹⁹⁵ The Commission also noted that many transmission providers already publish congestion and curtailment data and that other pertinent information is otherwise available.¹⁹⁶

1. **Request for Rehearing**

90. Generation Developers seek rehearing of the Commission’s decision not to require the posting of congestion and curtailment information. They assert that transmission providers should want to post this information to improve siting decisions, but few transmission providers do so, and, even when they do, there is a lack of uniformity. Generation Developers add that non-disclosure agreements would address any confidentiality concerns.¹⁹⁷

91. Generation Developers also assert that the Commission did not explain why it concluded that posting the information is “technically infeasible” when the transmission provider already knows this information.¹⁹⁸ Generation Developers argue that the need

¹⁹⁵ *Id.* P 270.

¹⁹⁶ *Id.* P 271.

¹⁹⁷ Generation Developers Rehearing Request at 15-16.

¹⁹⁸ *Id.* at 16.

for additional effort on the part of the transmission provider should not outweigh the need for making this information available. Finally, Generation Developers state that posting the information furthers the Commission's goal for improving transparency, and failure to do so increases uncertainties in the interconnection process.¹⁹⁹

2. Determination

92. We deny Generation Developers' request for rehearing. First, we reiterate that many transmission providers already publish some congestion and curtailment data such as locational marginal price data and dispatch reports.²⁰⁰ Furthermore, we again note that a significant amount of publicly available information for the Eastern Interconnection is contained in the NERC Transmission Loading Relief (TLR) Logs, including the duration, direction, and MW of curtailments.²⁰¹ We also note that multiple commenters made a credible argument that imposing the proposed requirements would not provide information that would be useful for interconnection customers.²⁰² We disagree with Generation Developers that the Commission did not explain why providing such information is technically infeasible. As noted in Order No. 845, PJM Interconnection L.L.C. (PJM), for example, explained that it lacked the software capability to determine

¹⁹⁹ *Id.*

²⁰⁰ Order No. 845, 163 FERC ¶ 61,043 at P 271.

²⁰¹ *Id.*

²⁰² *See id.* P 264.

congestion causes.²⁰³ The Commission decided not to proceed with its proposal in light of the limited usefulness, difficulty, and technical infeasibility of complying with the proposed requirements. For these reasons, we continue to believe that it was not appropriate to proceed with the proposed requirement. Additionally, we note that, in a rulemaking proceeding, the agency is “accorded considerable deference in evaluating information presented and reaching decisions based upon its expertise,” and “the agency's decision to refrain from amending the elaborate, established regulatory scheme cannot be disturbed absent a strong showing that such action was unreasonable.”²⁰⁴

E. Definition of Generating Facility in the *Pro Forma* LGIP and *Pro Forma* LGIA

93. 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 large generator interconnection processes. Specifically, the Commission revised the definition of a generating facility in the *pro forma* LGIP and *pro forma* LGIA as follows (with additions in italics): “Generating Facility shall mean Interconnection Customer’s device for the production *and/or storage for later injection*

²⁰³ *Id.* PP 258, 270.

²⁰⁴ *Professional Drivers Council v. Bureau of Motor Safety*, 706 F.2d 1216, 1220-21 (D.C. Cir. 1983); *see also New York v. FERC*, 535 U.S. 1, at 28 (2002) (finding the Commission's choice not to assert jurisdiction represents a statutorily permissible policy choice).

of electricity identified in the Interconnection Request, but shall not include the interconnection customer's Interconnection Facilities.”²⁰⁵

1. Requests for Rehearing and Clarification

94. APS requests that the Commission revise the definition of “Generating Facility” to recognize the load characteristics of electric storage resources.²⁰⁶ APS’s concern is that the definition adopted by Order No. 845 could narrow the scope of studies that a transmission provider will perform, create ambiguity regarding the upgrades necessary to accommodate the load characteristics of electric storage resources, and create inconsistencies with the definition of “electric storage resource” in Order No. 841.²⁰⁷ APS also states that neither the *pro forma* LGIP nor the *pro forma* LGIA allow the transmission provider to study the load characteristics of electric storage resources and are not specific as to how the transmission provider should recover the costs for those studies or how the transmission provider should classify the upgrades needed to accommodate the load characteristics of electric storage resources for cost allocation purposes.²⁰⁸

²⁰⁵ Order No. 845, 163 FERC ¶ 61,043 at P 273.

²⁰⁶ APS Rehearing Request at 18.

²⁰⁷ *Id.* (citing *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 841, 162 FERC ¶ 61,127 (2018)). Order No. 841 defines an electric storage resource as “a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.” Order No. 841, 162 FERC ¶ 61,127 at n.1.

²⁰⁸ APS Rehearing Request at 19.

2. Determination

95. We deny APS' rehearing request. We reiterate that the definition change in Order No. 845 allows electric storage resources that wish to interconnect pursuant to the *pro forma* LGIP and *pro forma* LGIA to do so, and the revised definition is consistent with Order No. 792's revisions to the definition of "small generating facility" in the *pro forma* Small Generator Interconnection Procedures (SGIP) and *pro forma* Small Generator Interconnection Agreement (SGIA).²⁰⁹ While Order No. 845 revised the definition of generating facility, it did not define "electric storage resource."

96. Moreover, we find it is not necessary to impose requirements regarding the scope of studies needed to account for the load characteristics of electric storage resources and the upgrades required to accommodate those load characteristics here. In Order No. 845, the Commission did not take a position regarding, or impose requirements pertaining to, the load characteristics of electric storage resources. Instead, the Commission observed that transmission providers have the flexibility to address the load characteristics of electric storage resources and that electric storage resources have already interconnected pursuant to Commission-jurisdictional LGIPs and LGIAs.²¹⁰ The Commission also stated that, if a transmission provider finds that the terms of its *pro forma* LGIA are insufficient to accommodate a particular resource, "the LGIP permits a transmission

²⁰⁹ Order No. 845, 163 FERC ¶ 61,043 at P 273.

²¹⁰ *Id.* P 285.

provider to enter into non-conforming LGIAs when necessary.”²¹¹ Because the requirement in Order No. 845 is to allow electric storage resources to interconnect under the *pro forma* LGIP and *pro forma* LGIA, APS’s request and discussion of the load characteristics of electric storage resources are beyond the scope of Order No. 845.

F. Interconnection Study Deadlines

97. In Order No. 845, the Commission modified the *pro forma* LGIP to institute quarterly reporting requirements for transmission providers to report interconnection study performance data on their OASIS sites or public websites. The Commission also adopted requirements for 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 (Filed Report Requirement).

98. In adopting these reporting requirements, the Commission found that the reporting requirements provide increased transparency and information to interconnection customers and do not unduly burden transmission providers.²¹² It also found that the increased transparency resulting from these new requirements should provide for “improved queue management and better informed interconnection customer planning –

²¹¹ *Id.*

²¹² *Id.* P 307.

results that may be important enough to support some corresponding burden on transmission providers.”²¹³

1. **Adoption of Order No. 845 Interconnection Study Metric Reporting Requirements**

a. **Requests for Rehearing and Clarification**

99. Southern requests rehearing, arguing that the Commission failed to account for events outside of a transmission provider’s control and that the Filed Report Requirement could subject transmission providers to additional reporting requirements and penalties for circumstances beyond their control.²¹⁴ Southern contends that “this failure to make a rational connection between the facts and the requirement[s] adopted” is arbitrary and capricious and in violation of the law.²¹⁵ Southern contends that the Commission has adopted skewed metrics that inappropriately suggest that delays are the fault of the transmission provider without regard to possible interconnection customer action. Southern contends that this approach could lead to a determination that a transmission provider is not using reasonable efforts and result in a possible penalty.²¹⁶

100. Southern also seeks rehearing on the start date for measuring interconnection study performance metrics. It asserts that the date that a transmission provider receives an executed study agreement from the interconnection customer is not the appropriate

²¹³ *Id.*

²¹⁴ Southern Rehearing Request at 3, 10-11.

²¹⁵ *Id.* at 10-11.

²¹⁶ *Id.*

start date. In support of this argument, it points out that the transmission provider may not receive additional items required for an interconnection request, such as study deposits and technical data, for some time after the execution of the study agreement. Southern states that, if the Commission does not adopt “a revised start date that commences with the receipt of the study deposit and provision of complete and valid data, then . . . [it] should clarify that an Interconnection Customer is required to provide the study deposit and complete and valid technical data before the Transmission Provider is required to begin the study.”²¹⁷

b. Determination

101. We deny Southern’s rehearing request that the Commission reconsider the requirement for transmission providers to quarterly post interconnection study metrics. The purpose of the study reporting requirements is to improve interconnection customer planning, transmission provider queue management, and Commission oversight. As noted in Order No. 845, we believe that the increased transparency provided through the reported study information could “allow interconnection customers to assess whether a transmission provider is using ‘reasonable efforts’ to process interconnection studies” and allow them “to develop informed expectations about how long the interconnection study portion of the process actually takes” within a particular transmission system.²¹⁸ The

²¹⁷ *Id.* at 12.

²¹⁸ Order No. 845, 163 FERC ¶ 61,043 at P 306 (quoting *Pro forma* LGIP Section 1 (Definition)).

Commission has acknowledged that interconnection study delays may not be the result of the transmission provider's actions, and, in recognition of this possibility, it declined to implement automatic penalties for study delays.²¹⁹ While we understand that Southern has concerns that posting data on transmission providers' consistency with tariff study timeframes may result in parties attempting to place blame on transmission providers, we note that the reported metric data in itself does not determine drivers for possible study data variance. The reported metrics are simply a transparency tool into the results, but not the drivers, of study completion. The posted study metrics indicate the proportion of interconnection studies a transmission provider is able to complete in the time frames established in its LGIP. We note that transmission providers are able to provide the rationale for and details regarding interconnection study delays to relevant interconnection customers under the provisions of sections 6.3, 7.4, and 8.3 in the *pro forma* LGIP and to other stakeholders as part of the information in the reports submitted under the Filed Report Requirement.

102. As the Commission noted in Order No. 845, the detailed information provided to the Commission through the Filed Report Requirement should be particularly beneficial in identifying process deficiencies and the causes of delays in regions that persistently experience significant delays.²²⁰ This requirement also creates some consistency in the process for interconnection customers to obtain certain interconnection study information

²¹⁹ *Id.* P 309.

²²⁰ *Id.* PP 308, 310.

from transmission providers, and they will create a record that will allow the Commission to better assess the reasons for interconnection study delays.

103. We also deny Southern's request for rehearing regarding the start date for measuring interconnection study performance metrics, which Order No. 845 specifies as beginning with the execution of the relevant interconnection study agreement. Pursuant 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 comparison²²¹ against the study time frame specified for that interconnection study in the *pro forma* LGIP, as established in Order No. 2003.²²² For purposes of consistency, the Commission chose to use the execution of an interconnection study agreement as the starting point for this comparison period because the *pro forma* LGIP uses the execution of an interconnection study agreement as the starting point for determining the time frame for completing an interconnection study.²²³ In response to Southern's expressed concern, we note, however, that, as

²²¹ See *Pro Forma* LGIP, Sections 3.5.2.1(D), 3.5.2.2(D), & 3.5.2.3(D).

²²² See *Pro Forma* LGIP, Section 6.3, 7.4, & 8.3.

²²³ See, e.g., *Pro Forma* LGIP, Section 6.3: "The Transmission Provider shall use Reasonable Efforts to complete the Interconnection Feasibility Study no later than forty-five (45) Calendar Days after the Transmission Provider receives the fully executed Interconnection Feasibility Study Agreement." See also *Pro Forma* LGIP, Sections 7.4 & 8.3.

established in Order No. 2003, an executed interconnection study agreement is submitted concurrently with a study deposit and the provision of technical data called for in the interconnection study agreement.²²⁴ As such, the timing for these components and their relationship with submission of an executed interconnection agreement has already been established and was not changed by Order No. 845.

2. Interconnection Study Data Posting Requirements

a. Requests for Rehearing and Clarification

104. EEI requests clarification on two issues related to reporting interconnection study metrics. First, EEI requests clarification that the interconnection study metric reporting requirement begins with data for 2018, because Order No. 845 became effective on July 23, 2018.²²⁵ EEI notes that Order No. 845 adopts the NOPR language requiring the posting of quarterly metrics beginning with 2017. In response, EEI expresses concern that the study data required may not be available retroactively to the beginning of calendar year 2017 in the detail required by Order No. 845.

²²⁴ See, e.g., *Pro Forma* LGIP, Section 6.1: “The Interconnection Customer shall execute and deliver to the Transmission Provider the Interconnection Feasibility Study Agreement along with a \$10,000 deposit no later than thirty (30) Calendar Days after its receipt. On or before the return of the executed Interconnection Feasibility Study Agreement to the Transmission Provider, the Interconnection Customer shall provide the technical data called for in Appendix 1, Attachment A.” See also *Pro Forma* LGIP, Sections 7.2 & 8.1.

²²⁵ EEI Rehearing Request at 18.

105. Second, EEI seeks clarification on the timing for filing reports if a transmission provider triggers the Filed Report Requirement.²²⁶ Specifically, EEI asks how to comply with the Filed Report Requirement to submit a report “within 45 days of the end of the calendar quarter” if posted data from 2017 indicate that the Filed Report Requirement was triggered even though Order No. 845 “did not go into effect until Q2 2018.”²²⁷

106. To clarify that the events that would trigger the Filed Report Requirement begin after Order No. 845 became effective, EEI recommends that the Commission revise section 3.5.3 of the *pro forma* LGIP as follows (with proposed deletions in brackets from and proposed additions in italics):

3.5.3 Transmission Provider is required to post on OASIS or its website the measures in paragraph 3.5.2.1(A) through paragraph 3.5.2.4(F) for each calendar quarter within 30 days of the end of the calendar quarter. Transmission Provider will keep the quarterly measures posted on OASIS or its website for three calendar years with the first required [reporting year to be 2017] *quarterly report to be for the first calendar quarter after the effective date of Order No. 845.* If Transmission Provider retains this information on its website, a link to the information must be provided on Transmission Provider’s OASIS site.²²⁸

b. Determination

107. We grant EEI’s request for clarification and confirm that the date for measuring study performance metrics and the reporting requirements do not require transmission providers to post 2017 interconnection study metrics. EEI requested that the posting

²²⁶ *Id.*

²²⁷ *Id.* at 19.

²²⁸ *Id.*

requirement begin in the 2018 calendar quarter after Order No. 845 becomes effective.²²⁹ However, in light of the Commission's granting of a compliance extension to a date 90 days after issuance of this order,²³⁰ we likewise extend the commencement of the retention and posting requirements. The reporting requirement shall commence in the first calendar quarter of 2020. This applies to both the study metrics reporting requirement and the Filed Report Requirement. To effectuate this clarification, we revise section 3.5.3 of the *pro forma* LGIP as follows (with deletions from and additions to the language from Order No. 845 in brackets and in italics, respectively):

Transmission Provider is required to post on OASIS or its website the measures in paragraph 3.5.2.1(A) through paragraph 3.5.2.4(F) for each calendar quarter within 30 days of the end of the calendar quarter. Transmission Provider will keep the quarterly measures posted on OASIS or its website for three calendar years with the first required [reporting year to be 2017] *report to be in the first quarter of 2020*. If Transmission Provider retains this information on its website, a link to the information must be provided on Transmission Provider's OASIS site.

G. Requesting Interconnection Service below Generating Facility Capacity

108. In Order No. 845, the Commission modified the *pro forma* LGIP to allow interconnection customers to request interconnection service that is lower than the

²²⁹ As noted below in Section J.1. Compliance and Effective Dates, EEI requested an extension of the Order No. 845 Compliance deadline.

²³⁰ Notice of Extension of Compliance Date, Docket No. RM17-8-000 (Oct. 3, 2018).

proposed generating facility capacity,²³¹ 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.²³²

The Commission also clarified that interconnection customers may either request interconnection service below generating facility capacity in their interconnection requests, or reduce their levels of requested interconnection service by up to 60 percent and 15 percent, respectively, at two subsequent points in the interconnection process: (1) prior to returning an executed system impact study agreement; and (2) prior to returning an executed facilities study agreement.²³³

109. With respect to the need to enforce limits on energy injection through monitoring and control technologies, and the related issue of penalties for over-generation, the Commission largely relied on existing provisions of the *pro forma* LGIA to address these needs. These include any provisions related to system protection facilities and any provisions that allow a transmission provider to curtail service or terminate an LGIA in response to an interconnection customer exceeding its energy injection limit.²³⁴

²³¹ The term generating facility capacity means “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.

²³² Order No. 845, 163 FERC ¶ 61,043 at P 367.

²³³ *Id.* PP 405-06.

²³⁴ *Id.* PP 369-72, 396, 416-17.

110. The Commission also required transmission providers to study interconnection requests at the level of interconnection service requested by the interconnection customer for purposes of identifying interconnection facilities and network upgrades. Furthermore, the Commission stated that transmission providers may, if determined necessary to ensure safety and reliability, perform studies at the full generating facility capacity. The Commission clarified that, in such circumstances, the transmission provider must provide a detailed written explanation for such a determination to the interconnection customer.²³⁵ The Commission also required 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.

1. Requests for Rehearing and Clarification

111. APS argues that the indemnification and liability provisions of the *pro forma* LGIA would not protect transmission providers where the action or inaction of an interconnection customer resulted in damage to or loss of use of the transmission provider's equipment or facilities or where such damage resulted in increased costs or loss of revenue for transmission providers. APS asks the Commission to clarify that transmission providers may propose stronger indemnification provisions in their LGIPs or LGIAs for interconnection service that is less than a generating facility's generating facility capacity. According to APS, operational controls can fail, and without explicit

²³⁵ *Id.* PP 383-84.

provisions addressing interconnection customer liability, the reform inequitably allocates consequential risk (which is directly attributable to a generating facility's operation) to transmission providers. For these reasons, APS requests clarification that transmission providers may propose LGIP/LGIA provisions to protect themselves from these risks or costs. APS also asks the Commission to explicitly define the interconnection customer's responsibilities for security, liability, indemnification, and overall reliability if an interconnection customer is interconnecting at a capacity lower than the full generating facility capacity.²³⁶

112. AWEA requests clarification regarding the timing of when a transmission provider must inform the interconnection customer of its election to perform additional studies at the full generating facility capacity. Specifically, AWEA argues that the transmission provider should inform the interconnection customer before performing these additional studies so that the interconnection customer can provide additional information or otherwise alleviate transmission provider concerns without the loss of time and money it may otherwise spend on additional studies. AWEA notes that the interconnection customer may bear the cost of additional studies and may seek to pursue dispute resolution if there is no agreement on the adequacy of control technologies or the need for additional study at the full generating facility capacity.²³⁷

²³⁶ APS Rehearing Request at 15-16.

²³⁷ AWEA Request for Clarification at 6-7.

113. AWEA also asks the Commission to clarify that there should be flexibility for the interconnection customer to wait until a facilities study is complete before the interconnection customer has to specify any required control technologies. It argues that this clarification is necessary to reconcile ambiguity in Order No. 845 concerning whether it is the interconnection customer's or transmission provider's responsibility to propose control technologies for a generating facility seeking service below generating facility capacity. In particular, AWEA is unable to reconcile two statements made by the Commission: (1) "any control technologies proposed by the interconnection customer to restrict the generating facility's output to the requested interconnection service levels must be identified in the project description at the beginning of the study process," and (2) the Commission sees "no reason to preclude a customer from relying on the transmission provider to identify protection and control technologies in the first instance."²³⁸

2. **Determination**

114. We deny APS's request for clarification because existing provisions in the *pro forma* LGIA are sufficient to address APS's concerns. More specifically, we find that article 18.1 of the *pro forma* LGIA in combination with articles 9.3 (Transmission Provider Obligations) and 9.4 of the *pro forma* LGIA (Interconnection Customer Operations), are adequate to address APS's concerns. Article 18.1 indemnifies a party from "any and all damages, losses, claims . . . , demand, suits, recoveries, costs and

²³⁸ *Id.* at 7 (quoting Order No. 845, 163 FERC ¶ 61,043 at P 396).

expenses, court costs, attorney fees, and all other obligations by or to third parties, *arising out of or resulting from the other Party's action or inactions of its obligations under this LGIA*"²³⁹ and covers "the amount of such Indemnified Person's actual loss, net of any insurance or other recovery."²⁴⁰ *Pro forma* LGIA article 9.4 requires the interconnection customer "to operate, maintain and control the Large Generating Facility . . . in a safe and reliable manner . . . in accordance with this LGIA" and "all applicable requirements of the Control Area of which it is part, as such requirements are set forth in Appendix C, Interconnection Details, of this LGIA." The phrase "action or inactions of its obligations under this LGIA" in article 18.1 would include failure by the interconnection customer to abide by article 9.4 and Appendix C to the LGIA. Therefore, if the interconnection customer requests interconnection service below generating capacity, it commits to operate consistent with such a request under section 3.1 of the *pro forma* LGIP, which states that "[t]he necessary control technologies and protection systems . . . for exceeding the level of Interconnection Service established in the executed, or requested to be filed unexecuted, LGIA shall be established in Appendix C of that executed, or requested to be filed unexecuted, LGIA."²⁴¹ Moreover, Appendix C of the LGIA, which contains interconnection details specific to the interconnection request, must memorialize the

²³⁹ *Pro forma* LGIA Art. 18.1.

²⁴⁰ *Id.* Art. 18.1.2 (emphasis added).

²⁴¹ *See Pro Forma* LGIP Section 3.1.

interconnection customer's commitment to operate consistent with its request for interconnection service below generating facility capacity. We note that the Commission has previously required the inclusion of such operating requirements in Appendix C.²⁴²

115. It is the transmission provider's responsibility to ensure that Appendix C of the LGIA includes these operational requirements. More specifically, under *pro forma* LGIA article 9.3 (Transmission Provider Obligations), the transmission provider "has the responsibility for establishing the Interconnection Customer's operating instructions and operating protocols and procedures" and because "these instructions, protocols, and procedures . . . include reliability requirements, article 9.3 . . . gives the Transmission Provider responsibility for modifications to Appendix C."²⁴³

116. Accordingly, we find the existing indemnification provision in *pro forma* LGIA article 18.1 would cover an action or inaction by the interconnection customer related to overgeneration because the interconnection customer would have failed to operate its generating facility consistent with its LGIA obligations. Because of this finding, we revise the last sentence of section 3.1 of the *pro forma* LGIP to now read "[t]he necessary

²⁴² See, e.g., *Essential Reliability Services and the Evolving Bulk-Power System—Primary Frequency Response*, Order No. 842, 162 FERC ¶ 61,128, at P 180 (2018) (requiring interconnection customer and transmission providers to establish in Appendix C of an LGIA the operating range for an interconnecting electric storage resource that considers the system needs for primary frequency response and the physical limitations of the electric storage resource).

²⁴³ *Bonneville Power Admin.*, 112 FERC ¶ 61,195, at P 20 (2005), *order on reh'g*, 113 FERC ¶ 61,005 (2005).

control technologies and protection systems shall be established in Appendix C of the executed, or requested to be filed unexecuted, LGIA.”²⁴⁴ In Order No. 845, the Commission declined to generically adopt into the *pro forma* LGIP any additional financial penalties for exceeding the limitations for interconnection service established in the interconnection agreements. However, the Commission did allow a transmission provider to propose and justify a need for additional penalties in a section 205 filing. We note that, if a transmission provider were to propose additional penalties, then information on the additional penalties should also be included in Appendix C of the LGIA. On a different but related note, it is worth pointing out that an interconnection customer’s failure to abide by the operating requirements contained in Appendix C may constitute a breach of the LGIA and may trigger the default and termination provisions in articles 17.1.1 and 17.1.2 of the *pro forma* LGIA, respectively.

117. In response to AWEA’s request to require a transmission provider to inform the interconnection customer before performing additional studies at the full generating facility capacity, we grant clarification and clarify that a transmission provider must provide a detailed explanation of its determination to perform additional studies at the full generating facility capacity to an interconnection customer prior to performing the additional studies. This explanation will allow the interconnection customer to understand the transmission provider’s reasoning for determining that additional studies are necessary before the studies are conducted. We also reiterate Order No. 845’s

²⁴⁴ *Pro Forma* LGIP Section 3.1.

requirement that, if after the additional studies are complete, the transmission provider determines that additional network upgrades are necessary, then the transmission provider must: (1) specify which additional network upgrade costs are based on which studies; and (2) provide a detailed explanation of why the additional network upgrades are necessary.²⁴⁵ Accordingly, we revise the paragraph at the end of section 3.1 in the *pro forma* LGIP to include the following sentence (with new additions from Order No. 845 in italics):

These requests for Interconnection Service shall be studied at the level of Interconnection Service requested for purposes of Interconnection Facilities, Network Upgrades, and associated costs, but may be subject to other studies at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by the Interconnection Customer. *If after the additional studies are complete, Transmission Provider determines that additional Network Upgrades are necessary, then Transmission Provider must: (1) specify which additional Network Upgrade costs are based on which studies; and (2) provide a detailed explanation of why the additional Network Upgrades are necessary.*

118. We deny AWEA's request for clarification to allow an interconnection customer the flexibility to propose control technologies to the transmission provider after the completion of the facilities study because allowing such flexibility could cause delays in the processing of the transmission provider's queue. However, we reiterate that the interconnection customer may propose control technologies when it submits its interconnection request at the beginning of the interconnection process, or, if it chooses not to, then it may rely on the transmission provider to identify the necessary control

²⁴⁵ Order No. 845, 163 FERC ¶ 61,043 P 384.

technologies. Additionally, Order No. 845 stated that an interconnection customer may request to reduce its interconnection service by up to 60 percent before it returns an executed system impact study agreement to the transmission provider and by up to an additional 15 percent prior to the return of an executed facilities study agreement.²⁴⁶ Because Order No. 845 permits the interconnection customer to reduce its interconnection service below generating facility capacity at these two other points in the generator interconnection process,²⁴⁷ we grant rehearing in part to find that an interconnection customer may propose control technologies at both of these points as well. We note that this clarification still preserves the transmission provider's ability to ensure system protection under the existing *pro forma* LGIA.²⁴⁸

H. Utilization of Surplus Interconnection Service

119. In Order No. 845, the Commission adopted *pro forma* LGIP and *pro forma* LGIA provisions to enable a new interconnection customer to utilize the unused portion of an existing interconnection customer's interconnection service within specific parameters. The intent was to reduce costs for interconnection customers and improve wholesale market competition by increasing the utilization of existing interconnection facilities and network upgrades rather than requiring new ones. These reforms were also intended to

²⁴⁶ *Id.* P 396.

²⁴⁷ *Id.* P 406; *see also pro forma* LGIP Sections 4.4.1 & 4.4.2.

²⁴⁸ Order No. 845, 163 FERC ¶ 61,043 at P 372; *see also pro forma* LGIA Section 9.7.4.1.

improve capabilities at existing generation facilities, to prevent stranded costs, and to improve access to the transmission system.²⁴⁹

120. As relevant to the requests for rehearing and clarification, in Order No. 845, the Commission modified the *pro forma* LGIP and *pro forma* LGIA to: (1) add a definition for “Surplus Interconnection Service” to section 1 of the *pro forma* LGIP and to article 1 of the *pro forma* LGIA,²⁵⁰ and (2) add a new section 3.3 to the *pro forma* LGIP that requires the transmission provider to establish a process for the use of surplus interconnection service.²⁵¹

121. Also relevant to the requests for rehearing, Order No. 845 required “transmission providers to provide an expedited process for interconnection customers to utilize or transfer surplus interconnection service at a particular point of interconnection. This process would be expedited in the sense that it would take place outside of the

²⁴⁹ See Order No. 845, 163 FERC ¶ 61,043 at P 467.

²⁵⁰ *Id.* (“Surplus Interconnection Service shall mean any unneeded portion of Interconnection Service established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service is utilized the total amount of Interconnection Service at the Point of Interconnection would remain the same.”).

²⁵¹ *Id.* (“Utilization of Surplus Interconnection Service – Transmission Provider must provide a process that allows an Interconnection Customer to utilize or transfer Surplus Interconnection Service at an existing Point of Interconnection. The original Interconnection Customer or one of its affiliates shall have priority to utilize Surplus Interconnection Service. If the existing Interconnection Customer or one of its affiliates does not exercise its priority, then that service may be made available to other potential interconnection customers.”).

interconnection queue.”²⁵² It also clarified that the use or transfer of surplus interconnection service does not entail queue jumping.²⁵³ Finally, Order No. 845 permitted a limited, continuation of surplus interconnection service for up to one year following the retirement and permanent cessation of commercial operations of the original interconnection customer’s generating facility.²⁵⁴ Below, we address the issues raised in requests for rehearing or clarification.

1. **Original Interconnection Customer’s Ability to Utilize or Transfer Surplus Interconnection Service**

a. **Requests for Rehearing and Clarification**

122. Non-Profit Utility Trade Associations state that the Commission’s surplus interconnection service decision builds on the premise that transmission providers, when considering interconnection applications, must study the implications of generation output at full capacity, and assume that each interconnection customer is fully using its interconnection service when studying new requests. Non-Profit Utility Trade Associations note that, on that basis, the Commission then built a “right” under the tariff for interconnection customers to market surplus interconnection capacity.²⁵⁵

²⁵² *Id.* P 486.

²⁵³ *Id.* PP 487.

²⁵⁴ *Id.* PP 505-06.

²⁵⁵ Non-Profit Utility Trade Associations Rehearing Request at 9.

123. However, Non-Profit Utility Trade Associations allege that Order No. 845 fails to account for the “dynamic nature of the transmission planning and operating environment.”²⁵⁶ In particular, they argue that the Commission explicitly recognized that transmission planners build certain assumptions into their models when it stipulated that studies for the use of surplus interconnection capacity will focus on available reactive power studies, short circuit fault duty analyses, stability analyses, and any other appropriate studies.²⁵⁷ Non-Profit Utility Trade Associations argue that, for planning models, assuming that interconnection customers may at any time market capacity that has long been idle alters the planning environment and will likely require additional investment.²⁵⁸

124. According to Non-Profit Utility Trade Associations, while “the interconnection capacity needed by any interconnection customer may be effectively free . . . when initially secured,” it may later become valuable when a subsequent interconnection customer submits an interconnection request. Non-Profit Utility Trade Associations argue, however, that permitting an interconnection customer an ongoing opportunity to remarket interconnection service permits the value of the associated capacity to be set at the cost of system expansion, regardless of the cost to the interconnection customer. According to Non-Profit Utility Trade Associations, such a result would be an unearned

²⁵⁶ *Id.* at 9.

²⁵⁷ *Id.* at 9-10 (citing Order No. 845, 163 FERC ¶ 61,043 at P 461).

²⁵⁸ *Id.*

windfall for the initial interconnection customer, and holds the potential for it to assess monopoly rent meaningfully in excess of its cost. Non-Profit Utility Trade Associations further contend that, if the original interconnection customer does not release “its capacity,” a transmission provider would have “to build out the grid for an ensuing customer,” with the resulting cost to be borne ultimately by the system as a whole as costs are rolled into system-wide rates under the Commission’s generic interconnection pricing policy.²⁵⁹

125. Furthermore, Non-Profit Utility Trade Associations argue that, under Order No. 2003, all system customers are ultimately responsible for network upgrade costs associated with interconnection applications on a rolled-in cost basis.²⁶⁰ Non-Profit Utility Trade Associations assert that this fact “undermines any equitable claim that interconnection customers may have to the financial benefit of transmission capacity associated with network upgrades for which they have provided initial funding.”²⁶¹ For this reason, Non-Profit Utility Trade Associations argue that the Commission should withdraw the surplus interconnection service provisions because they will drive up system-wide costs, permit interconnection process gaming, and will not increase system efficiency.²⁶² Non-Profit Utility Trade Associations concede that, after an interconnection is complete, some surplus capacity may exist. For this reason, Non-

²⁵⁹ *Id.* at 9-11.

²⁶⁰ *Id.* at 10-11 (citing Order No. 2003, 104 FERC ¶ 61,103 at PP 130-33).

²⁶¹ *Id.* at 11.

²⁶² *Id.* at 11-12.

Profit Utility Trade Associations do not oppose modifications to permit the transfer of surplus capacity for a period of five years after the interconnection's energization.

b. Determination

126. We deny Non-Profit Utility Trade Associations' request for rehearing. First, we disagree with Non-Profit Utility Trade Associations that the establishment of surplus interconnection service fails to account for the "dynamic nature of the transmission planning and operating environment."²⁶³ While transmission planners may make reasonable assumptions as to future transmission system use to plan for transmission system maintenance, the transmission provider has no right to assume in all circumstances that unused interconnection service will remain unused indefinitely. In fact, Order No. 845 explained that, "even if a generating facility only operates a few days a year, or routinely operates at a level below its maximum capacity, the remaining, unused interconnection service is assumed to be unavailable to other prospective interconnection customers."²⁶⁴ As long as the original interconnection customer remains in compliance with its LGIA, it retains the right to make full use of its contracted for interconnection service, and, so long as any necessary transmission service has been obtained, it may inject at the full level contracted for under its LGIA.²⁶⁵

²⁶³ *Id.* at 9.

²⁶⁴ Order No. 845, 163 FERC ¶ 61,043 at P 468.

²⁶⁵ *See id* PP 468-72.

127. As to the remainder of Non-Profit Utility Trade Associations' arguments, while we agree that, where transmission providers follow the Commission's Order No. 2003 crediting policy, transmission customers ultimately pay for interconnection-related network upgrades,²⁶⁶ this fact does not undermine the rationale for surplus interconnection service. The amount of interconnection service that was granted to the original interconnection customer remains the same throughout the term of its LGIA, whether or not that original interconnection customer ultimately receives credits for the cost of any network upgrades that may have been needed to accommodate its original interconnection request. Accordingly, the amount of surplus interconnection service that can be offered by the original interconnection customer likewise does not depend on whether the original interconnection customer receives or received credits for the cost of any network upgrades that may have been needed to accommodate its original interconnection request.

²⁶⁶ Specifically, under the *pro forma* LGIA of Order No. 2003, an interconnection customer only provides up-front financing of network upgrades that enable interconnection service. After the interconnection customer enters commercial operation, the transmission provider reimburses the interconnection customer through transmission service credits and rolls the cost of the network upgrades into its transmission rates over time. Order No. 2003, 104 FERC ¶ 61,103 at PP 693-96. See also LGIA Art. 11.4.1 ("Interconnection Customer shall be entitled to a cash refund, equal to the total amount paid to Transmission Provider and Affected System Operator, if any, for the Network Upgrades, including any tax gross-up or other tax-related payments, and not refunded to Interconnection Customer pursuant to Article 5.17.8 or otherwise, to be paid to Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under the Transmission Provider's Tariff and Affected System's Tariff for transmission services with respect to the Large Generating Facility").

128. In addition, we continue to find that these surplus interconnection service requirements serve to “enhance access to the transmission system at [a specific] point of interconnection” and are necessarily “limited in nature,” as stated in Order No. 845.²⁶⁷ These requirements are consistent with the fact that, once an original interconnection customer commences operation, nothing in its LGIA prohibits it from operating at the full amount of interconnection service established in its LGIA,²⁶⁸ taking into account any curtailment for temporary reliability reasons, even if it has not historically done so.²⁶⁹ In other words, rather than encouraging the withholding of interconnection capacity as asserted by Non-Profit Utility Trade Associations, the surplus interconnection service requirements make it easier for the original interconnection customer to utilize or transfer surplus interconnection service at a particular point of interconnection.

129. Similarly, we disagree with Non-Profit Utility Trade Associations’ argument that “[p]ermitting an original interconnection customer an ongoing opportunity to remarket interconnection service” may allow it “to assess monopoly rent meaningfully in excess of its cost.”²⁷⁰ As noted in Order No. 845, new interconnection customers retain the “ability

²⁶⁷ Order No. 845, 163 FERC ¶ 61,043 at PP 480-81.

²⁶⁸ For purposes of this argument, we assume that any necessary transmission service has been obtained to allow such operation of the generation facility at the full amount of interconnection service established in its LGIA.

²⁶⁹ *Id.* P 480.

²⁷⁰ Non-Profit Utility Trade Associations Rehearing Request at 9.

to submit an interconnection request for any requested point of interconnection directly with the transmission provider, rather than seeking surplus interconnection service with respect to an original interconnection customer's point of interconnection."²⁷¹

Furthermore, as also explained in Order No. 845, surplus interconnection service is, by definition, more limited in nature than new interconnection service provided by the transmission provider because: (1) the total output of the original interconnection customer plus the surplus interconnection service customer behind the same point of interconnection will be limited to the maximum total amount of interconnection service granted to the original interconnection customer; (2) the original interconnection customer will be able to stipulate the amount of surplus interconnection service that is available, to designate when that service is available, and to describe any other conditions under which surplus interconnection service at the point of interconnection may be used; and (3) it will only be available at the preexisting point of interconnection of the original interconnection customer.²⁷² Thus, surplus interconnection service is an inherently more limited service than non-surplus interconnection service. For these reasons, the original interconnection customer cannot assess monopoly rents through the sale of surplus interconnection service because a potential purchaser of surplus interconnection service can always opt instead for non-surplus interconnection service from the transmission

²⁷¹ See, e.g., Order No. 845, 163 FERC ¶ 61,043 at P 482; see also *id.* PP 490 & 507.

²⁷² See, e.g., *id.* P 481.

provider. That said, we note that making surplus interconnection service available when it was not available before provides a new option for interconnection customers that are willing to accept the limitations associated with surplus interconnection service.

2. Effect of Expedited Surplus Interconnection Service Process on the Queue and on Transmission Planning

a. Requests for Rehearing and Clarification

130. Some rehearing requests argue that the Commission has not adequately addressed the impact that the expedited surplus interconnection service process may have on the non-surplus interconnection queue. APS argues that the studies associated with surplus interconnection service must compete for the same transmission provider resources, including personnel, as other interconnection studies. Further, APS states that “where interim facilities are necessary . . . it is not clear how and when such facilities would become ‘contingent facilities’ in the normal interconnection study process.”²⁷³ APS adds that, where studies from a request for surplus interconnection service identify additional impacts, those impacts could affect interconnection customers that are already in the queue.²⁷⁴ As a result, APS asks the Commission to clarify that transmission providers may incorporate into their *pro forma* LGIAs and LGIPs provisions that are necessary to ensure that these issues, when they arise, can be resolved.

²⁷³ APS Rehearing Request at 14.

²⁷⁴ *Id.* at 13-15. APS raises the same issues with respect to provisional interconnection service.

131. Similarly, EEI and Southern argue that the Commission's rationale for the surplus interconnection service provisions fails to consider the impact to the transmission planning process if more than two customers seek to use the same interconnection service. They argue that, while the transmission provider can study the original interconnection customer and the surplus interconnection customer for a safe and reliable interconnection, transmission providers may find it increasingly difficult to reliably study subsequent interconnection requests and plan for future transmission system expansion.²⁷⁵

132. EEI also argues that, in all transmission planning studies, when considering safety and reliability evaluations such as breaker duty, grounding, or stability, the transmission provider considers all other transmission system components at full load even though most of these components do not operate at full capacity all the time. It argues that this methodology allows transmission providers to efficiently plan the transmission system to operate safely and reliably under stressed conditions and that the Commission should account for this planning consideration when implementing Order No. 845.²⁷⁶ Finally, EEI seeks guidance to address these implementation and operational issues and requests a technical conference or workshop to address these issues.²⁷⁷

²⁷⁵ EEI Rehearing Request at 15; Southern Rehearing Request at 15.

²⁷⁶ EEI Rehearing Request at 15.

²⁷⁷ *Id.* at 15-16.

b. Determination

133. We deny the requests by EEI, Southern, and APS for clarification and technical conference with respect to the potential impact on the queue of the expedited surplus interconnection service process, both with respect to interconnection requests and to transmission planning. While the Commission agrees with APS that, for a given transmission provider, the same personnel that would be responsible for processing the non-surplus interconnection queue would likely also be responsible for administering the surplus interconnection service process, this fact does not justify granting the requests for clarification. As noted in Order No. 845, transmission providers routinely conduct similar studies outside of the interconnection process without causing significant delays to other interconnection customers.²⁷⁸ None of the rehearing requests provided evidence refuting this assertion. We find it reasonable to assume that transmission providers will be able to similarly study surplus interconnection service requests without creating significant delays in the non-surplus interconnection process.

134. Additionally, we are not persuaded by the argument that transmission providers may find it increasingly difficult to reliably study later interconnection requests and plan for future transmission system expansion due to the need to assess multiple scenarios for surplus interconnection service at the same point of interconnection. This issue exists irrespective of whether surplus interconnection service is an available option, as there are

²⁷⁸ Order No. 845, 163 FERC ¶ 61,043 at P 488 (citing, e.g., MISO FERC Electric Tariff, Attachment X (76.0.0), Section 11.5).

always uncertainties and complexities surrounding transmission system modeling. These uncertainties require making assumptions as to future conditions that, by their very nature, cannot be predicted in the present with 100 percent accuracy.²⁷⁹ Considering all of the limitations associated with surplus interconnection service described elsewhere in this section, particularly the fact that it cannot be granted if it would require new network upgrades, we see no evidence that the mere existence of surplus interconnection service would fundamentally or significantly increase the difficulty of making assumptions as to future conditions in connection with transmission system modeling.

135. APS requests clarification as to how and when interim facilities would become “contingent facilities” in the normal interconnection study process. APS also requests clarification concerning additional impacts identified in surplus interconnection service studies affecting the determination of what upgrades are necessary for interconnection customers that are already in the queue. As discussed in more detail in the next section below, surplus interconnection service cannot be granted if doing so would require new network upgrades. Accordingly, surplus interconnection service should have no additional impacts affecting the determination of what upgrades are necessary for interconnection customers that are already in the queue. Similarly, because surplus

²⁷⁹ For example, it will always be difficult for a given transmission provider to know with certainty how much unaffiliated generation will retire in the future and how much new unaffiliated generation may ultimately be built to replace it, and making reasonable assumptions in order to address these and other uncertainties is a necessary and intrinsic part of transmission system modeling.

interconnection service will not be granted if it requires new network upgrades, there should be no interim facilities that need to be considered contingent facilities in the normal interconnection study process. Accordingly, we find no basis to grant clarification.²⁸⁰

3. **Impact of Differences in Electrical Characteristics between the Surplus and Original Interconnection Customers**

a. **Requests for Rehearing and Clarification**

136. EEI states that where two generators with different electrical characteristics (e.g., short circuit contribution, fault current, harmonic profile) share a point of interconnection, if the transmission provider receives a third interconnection request on the same transmission line, the transmission provider will have to either (1) choose one of the two original generators to include for the third generator's interconnection evaluation or (2) perform multiple evaluations to consider all potential generator operation scenarios. Under the first scenario, according to EEI, it is possible that the study could miss potential upgrades that could be necessary, and under the second scenario, the transmission provider's study and the transmission planning process become more

²⁸⁰ Similarly, APS raised this issue in regards to provisional interconnection service, and we deny clarification with respect to provisional interconnection on the same basis. Furthermore, provisional interconnection is only available when available studies or additional studies as necessary indicate that there is a level of interconnection that can occur without any additional interconnection facilities and/or network upgrades. *See id.* P 441.

complex. As a result, EEI requests that the Commission convene a technical conference or staff-led workshop to address these issues prior to requiring implementation.²⁸¹

137. For similar reasons, Southern asks the Commission to clarify that transmission providers are only obligated to provide surplus interconnection service up to the amount that can be provided without building new network upgrades.²⁸²

b. Determination

138. We clarify that, by definition, surplus interconnection service is only available up to the level that can be accommodated without requiring the construction of new network upgrades. We agree that a surplus interconnection service customer may have significantly different electrical characteristics (e.g., short circuit contribution, fault current, harmonic profile) than the original interconnection customer, and that those differences may sometimes result in the need to take actions up to and potentially including the construction of new network upgrades to maintain the reliable operation of the system in order to accommodate the new surplus interconnection request. This could be true even if the total injections of energy from the original and surplus interconnection customers are limited to the level of interconnection service contracted for by the original interconnection customer. Thus, in recognition of the Commission's stated objective of increasing efficiency in the interconnection process through this reform, we clarify that surplus interconnection service is only available up to the amount that can be

²⁸¹ EEI Rehearing Request at 14-15.

²⁸² Southern Rehearing Request at 16.

accommodated without requiring new network upgrades.²⁸³ This clarification should address concerns regarding the potential impact of differences in electrical characteristics, and therefore, no additional technical conference or staff-led workshop is necessary.

4. Independent Entity Variations

a. Requests for Rehearing and Clarification

139. NYISO asks the Commission to clarify that Order No. 845 does not limit the manner in which RTOs/ISOs demonstrate independent entity variations with respect to surplus interconnection service. Specifically, NYISO cites paragraph 477 of Order No. 845, which appears to create highly prescriptive surplus interconnection service requirements with regard to RTO's/ISO's interconnection procedures. However, NYISO argues that the assumptions concerning the need for, and benefits of, surplus interconnection service are not applicable to NYISO, whose rules are "fundamentally different" from other transmission providers' rules.²⁸⁴

²⁸³ We note that surplus interconnection service will likely require new directly assignable interconnection facilities to connect the surplus interconnection service customer to the original interconnection customer's interconnection facilities. However, interconnection facilities are always the sole cost responsibility of the relevant interconnection customer, so requiring more of those for a surplus interconnection request will not impact others in the interconnection queue.

²⁸⁴ NYISO Request for Rehearing at 6-19. NYISO provides examples of these regional rules that it asserts are incompatible with the surplus interconnection service requirements.

b. Determination

140. We grant NYISO's request for rehearing because the Commission did not intend to limit the manner in which RTOs/ISOs may seek independent entity variations with respect to surplus interconnection service. Order No. 845 states that:

for a process to be consistent with or superior to, *or an independent entity variation from*, the Final Rule's surplus interconnection service requirements, the transmission provider must demonstrate, at a minimum, that its tariff: (1) includes a definition of surplus interconnection service consistent with the Final Rule; (2) provides an expedited interconnection process outside of the interconnection queue for surplus interconnection service, consistent with the Final Rule; (3) allows affiliates of the original interconnection customers to use surplus interconnection service for another interconnecting generating facility consistent with the Final Rule; (4) allows for the transfer of surplus interconnection service that the original interconnection customer or one of its affiliates does not intend to use; and (5) specifies what reliability-related studies and approvals are necessary to provide surplus interconnection service and to ensure the reliable use of surplus interconnection service.²⁸⁵

141. Upon further consideration, we find that it was not appropriate to limit the flexibility of independent entities to request independent entity variations. This passage from the preamble of Order No. 845 should have been limited to discussing whether a process is "consistent with or superior to" Order No. 845 requirements and should not have referred to independent entity variations. Therefore, we modify this portion of the preamble of Order No. 845 to eliminate the phrase "or an independent entity variation from." As NYISO correctly notes, requesting an independent entity variation provides more flexibility than requesting a variation that is "consistent with or superior to" a final

²⁸⁵ Order No. 845, 163 FERC ¶ 61,043 at P 477 (emphasis added).

rule's requirements.²⁸⁶ Nevertheless, we will not otherwise address any specific independent entity variation arguments in NYISO's request for clarification at this time. Such arguments are more appropriate in a proceeding on a particular transmission provider's Order No. 845 compliance filing.

5. Additional Requests for Clarification Regarding Surplus Interconnection Service

a. Requests for Rehearing and Clarification

142. Some of the rehearing requests argue more narrowly that the surplus interconnection service requirements are inconsistent with particular Commission-approved provisions in transmission providers' own tariffs. In this regard, Southern argues that no LGIA to which Southern is a party obligates it to maintain an interconnection customer's capability to be designated as a network resource after the original generating facility's commercial operation date. It explains that any preservation of capacity would instead "be done under an appropriate transmission delivery service arrangement."²⁸⁷ Therefore, Southern asks for clarification that the statement "that if the original LGIA is for [Network Resource Interconnection Service (NRIS)], the surplus interconnection customer could be either [Energy Resource Interconnection Service (ERIS)] or NRIS" does not apply to Southern.²⁸⁸

²⁸⁶ Order No. 2003, 104 FERC ¶ 61,103 at P 26.

²⁸⁷ Southern Rehearing Request at 16 (citing to a portion of Attachment J-1 to Southern's tariff).

²⁸⁸ *Id.* at 17.

143. AWEA requests clarification on two issues regarding the implementation of the surplus interconnection service requirements. First, AWEA seeks clarification that the Commission intends to accommodate a “Multi-Phase model,” which according to AWEA differs from the MISO Net Zero Interconnection Service Model. AWEA describes the Multi-Phase Model as a situation where a developer that planned to build a plant with a higher generating facility capacity enters a contract for a lower capacity during its development process. It argues that this situation could “leave[] excess capacity in the interconnection service that is not immediately used,” and the developer “may wish to build an additional generating plant at that same site,” or “may wish to sell the excess capacity to another party.”²⁸⁹ AWEA contends that this Multi-Phase model would fit under the Commission’s definition of surplus interconnection capacity.²⁹⁰ AWEA also states that some RTOs/ISOs have procedures that allow the initial party to reassign or transfer surplus interconnection capacity to another party consistent with this Multi-Phase model.²⁹¹ AWEA therefore requests clarifications that the situations “similar to that of the Multi-Phase model described above, in addition to the Net Zero model, are . . . an intended use of surplus interconnection capacity, and that transmission providers should also provide a process by which the Multi-Phase model can allow the efficient use of

²⁸⁹ AWEA Request for Clarification at 3.

²⁹⁰ *Id.*

²⁹¹ *Id.* at 4.

existing interconnection capacity.”²⁹² It argues that both approaches to the use of surplus capacity could be accomplished through the same process or in two different processes.²⁹³

144. Second, regarding retirement of the original generator associated with a surplus interconnection service agreement, AWEA requests that the Commission clarify that, during the one-year grace period prior to the retirement of the original generator, a new generator can apply for repowering or replacement at the point of interconnection, with the agreement of the original interconnection customer, under the RTO/ISO’s existing rules. Further, AWEA requests that the Commission clarify that, if the retirement and replacement process is successful, the surplus interconnection customer could continue to operate after that one-year grace period.²⁹⁴ AWEA also asks the Commission to clarify that the rules and processes that exist for replacement or repowering are also available to surplus interconnection service customers.²⁹⁵

b. Determination

145. We deny the requests for clarification by Southern and AWEA, as discussed further below. We deny Southern’s request for clarification regarding whether the statement “that if the original LGIA is for NRIS, the surplus interconnection customer could be either ERIS or NRIS” applies to Southern. Southern argues that, under its tariff,

²⁹² *Id.*

²⁹³ *Id.*

²⁹⁴ *Id.* at 5.

²⁹⁵ *Id.*

it is not obligated under any LGIA to maintain an interconnection customer's capability to be designated as a network resource after the original generating facility's commercial operation date because of a certain provision it added to its tariff. However, Southern fails to acknowledge the concerns the Commission identified when Southern first proposed this provision. Specifically, the Commission stated that "[a]lthough Southern states on rehearing that it was 'not trying to nullify, avoid, or evade the requirements of Order Nos. 2003 and 2003-A in adopting Attachment J-1,' we continue to find that, without the conditions discussed below, revised Attachment J-1 has not been shown to be consistent with or superior to the *pro forma* LGIA and LGIP."²⁹⁶ Among the referenced conditions was that Southern must add language stating that "other provisions of these sections notwithstanding, [the relevant analyses and studies] will be conducted in a manner that preserves the NRIS status of existing generators."²⁹⁷ Accordingly, we deny Southern's request for clarification on this issue. Where a particular original interconnection customer's interconnection service is NRIS, if a surplus interconnection customer seeks to interconnect at the same point of interconnection, then it may seek either ERIS or NRIS.

146. We find that AWEA's description of the Multi-Phase model is inconsistent with the surplus interconnection service described in Order No. 845. In Order No. 845, the

²⁹⁶ See *Southern Company Services, Inc.*, 109 FERC ¶ 61,014, at P 18 (2004).

²⁹⁷ See *id.* P 19.

Commission described the use of surplus interconnection service as appropriate when interconnection customers do not use the full generating facility capacity of their interconnection service due to the nature of their operations.²⁹⁸ The Commission also agreed with CAISO’s argument that “where the original interconnection customer . . . reduces the generating facility capacity of its facility from what was originally proposed for interconnection, it would not retain rights indefinitely to any excess interconnection capacity thus created.”²⁹⁹ Furthermore, in finding that there are no significant concerns regarding the potential for hoarding interconnection service, we relied on the fact that, currently, an original interconnection customer can only secure interconnection service based on the generating facility capacity of the generating facility that it constructs and continues to operate.³⁰⁰ In light of these findings, because AWEA’s proposed “Multi-Phase” model is based on the idea that the original interconnection customer would intentionally secure an amount of interconnection service in excess of the size of the generating facility that it constructs and continues to operate, we find that this concept would not be consistent with surplus interconnection service as defined in Order No. 845. 147. We also deny clarification with respect to AWEA’s requests related to repowering or replacement. To the extent that a particular transmission provider has repowering/replacement provisions in its tariff, nothing in Order No. 845 would alter

²⁹⁸ Order No. 845, 163 FERC ¶ 61,043 at P 480.

²⁹⁹ *Id.* P 493.

³⁰⁰ *Id.* P 490.

those provisions.³⁰¹ Furthermore, if a particular repowering/replacement process is successful, any continued operation from that point forward would then be under a new interconnection agreement associated with the outcome of the successful repowering/replacement process.

I. **Material Modification Definition and Incorporation of Advanced Technology**

148. In the *pro forma* LGIP, section 4.4 states that an interconnection customer that has requested a modification in writing to a transmission provider “shall retain its Queue Position if the modifications are in accordance with [*pro forma*] Sections 4.4.1, 4.4.2 or 4.4.5, or are determined not to be Material Modifications pursuant to 4.4.3.”³⁰² 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 changes to its interconnection request without risking the loss of its queue position. In addition, the Commission modified section 4.4.4 of the *pro forma* LGIP to require transmission providers to include a technological change procedure that includes the requisite information and process that the transmission provider will follow to assess whether an

³⁰¹ Similarly, to the extent that a particular transmission provider lacks such provisions, nothing in Order No. 845 creates a new obligation for the transmission provider to add them.

³⁰² *Pro forma* LGIP Section 4.4 (Modifications). Material modification “shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request with a later queue priority date.” *Pro forma* LGIP Section 1 (Definitions); *pro forma* LGIA Art. 1 (Definitions).

interconnection customer's proposed technological change is a material modification. Further, Order No. 845 required that transmission providers develop a definition of permissible technological advancement that would define a category of technological changes that will not result in the loss of queue position pursuant to the *pro forma* material modification provision.³⁰³

1. Requests for Rehearing and Clarification

149. EEI requests that the Commission clarify that it is not changing the definition of material modification established in Order No. 2003. It argues that the material modification procedure focuses on the entire interconnection queue, while the process for determining if a technological change is a material modification would only focus on electrical performance, even though improved or increased electrical performance “can and will have an impact on lower-queued resources.”³⁰⁴ EEI states that this issue is a concern because transmission providers must focus on grid reliability, and not all technological changes will have the same impact on the grid.³⁰⁵

³⁰³ Order No. 845, 163 FERC ¶ 61,043 at P 518.

³⁰⁴ EEI Rehearing Request at 17; *see also* Southern Rehearing Request at 13.

³⁰⁵ EEI Rehearing Request at 17. To illustrate its point, EEI argues that two different interconnection customers in different areas of the electric system may propose to incorporate the same technology changes. However, it contends that one technological change may not affect other interconnection customers in the queue (if, for example, no other interconnection requests are related to the same line or substation bus), while the other interconnection customer may impact the cost and timing for others in the queue (if, for example, other interconnection requests are related to the same line or substation bus). Thus, the latter would be considered a material modification, while the former would not. As another example, Southern offers that an interconnection customer may “replace [its]

150. EEI also asks whether the Commission created a new standard for evaluating what constitutes a material modification.³⁰⁶ EEI requests that the Commission clarify that the intent is not to change the definition of material modification as defined in Order No. 2003, which is related to one interconnection customer's impact on another customer in the queue.³⁰⁷

151. Southern argues that, because the NOPR did not indicate that the Commission was proposing to revise the definition of material modification, this failure would contravene the notice and comment requirements of the Administrative Procedure Act.³⁰⁸

2. Determination

152. In response to Southern and EEI, Order No. 845 did not change the existing material modification definition, which determines whether an interconnection customer's proposed change will cause it to lose its queue position based on whether it has a material impact on the cost or timing of any interconnection request with a later

inverters to decrease a generating facility's short circuit contribution . . . which could be considered 'greater or equal electrical performance'" but that this change could result in a breaker upgrade originally identified for this interconnection request to be triggered instead by a later-queued interconnection request. Thus, Southern reasons, this change would be a material modification. Southern Rehearing Request at 13-14.

³⁰⁶ *Id.* at 17.

³⁰⁷ *Id.*

³⁰⁸ Southern Rehearing Request at 14 (citing 5 U.S.C. 553 (2012); *Chocolate Mfrs. Ass'n of U.S. v. Block*, 744 F.2d 1098, 1104 (1985)).

queue priority date.³⁰⁹ Order No. 845’s requirement that transmission providers develop a definition of permissible technological advancement does not alter the definition of a material modification in the *pro forma* LGIP or conflict with the existing construct. Rather, Order No. 845 requires transmission providers to develop a definition of permissible technological advancements that the interconnection process will accommodate without triggering the loss of queue position pursuant to the material modification provision of the *pro forma* LGIP.³¹⁰ For purposes of clarity, we explain further how this revision will fit in with the existing provisions. Permissible technological advancements, as determined by the transmission provider, will be added to the existing list of modifications in section 4.4.2 of the *pro forma* LGIP that do not require a material modification assessment and thus do not result in the loss of an interconnection customer’s queue position.³¹¹ While the Commission included the correct *pro forma* LGIP language in section 4.4.2 of Appendix B, in the text, the Commission neglected to include the word “permissible.” Therefore, we clarify that section 4.4.2 of the *pro forma* LGIP should include the following language as subpart (c) (with emphasis supplied in italics):

a *Permissible* Technological Advancement for the Large Generating Facility after the submission of the interconnection request. Section 4.4.4

³⁰⁹ Sections 4.4.1, 4.4.2, and 4.4.5 of the *pro forma* LGIP enumerate modifications that an interconnection customer may make without losing its queue position.

³¹⁰ Order No. 845, 163 FERC ¶ 61,043 at P 530.

³¹¹ *See id.* App. B at Section 4.4.2.

specifies a separate technological change procedure including the requisite information and process that will be followed to assess whether the Interconnection Customer's proposed technological advancement under Section 4.4.2(c) is a Material Modification. Section 1 contains a definition of Permissible Technological Advancement.

153. It is noteworthy that existing interconnection customer modifications permitted under section 4.4.2 of the *pro forma* LGIP may affect lower-queued customers but do not result in loss of queue position.³¹² Thus, this requirement is similar to the existing exemptions laid out in section 4.4.2 of the *pro forma* LGIP, which allow for the identification in the tariff of specific changes to an interconnection request that do not result in the interconnection customer losing its queue position.

154. We deny rehearing regarding Southern's assertion that the Commission did not provide notice of its proposal to revise the definition of material modification. The NOPR did not propose, and Order No. 845 did not adopt, any revisions to the definition to material modification.

155. In response to EEI's and Southern's arguments that the requirements for a new technological change procedure and definition of permissible technological advancement are inconsistent with the definition of material modification, we clarify that the requirement that transmission providers develop a definition for permissible technological advancement is distinct from the other Order No. 845 requirement that

³¹² For example, the modifications listed in section 4.4.2 of the *pro forma* LGIP include a 15 percent decrease of electrical output (MW) that could have a material impact on the cost of a lower-queued interconnection request. *Pro forma* LGIP Section 4.4 (Modifications).

transmission providers develop a technological change procedure for determining whether or not a proposed technological change is a material modification. In particular, we note that a transmission provider's technological change procedure must specify the conditions under which a study will or will not be necessary to determine whether a proposed technological change is a material modification.³¹³ When studies are necessary, the interconnection customer's technological change request must demonstrate that the proposed incorporation of the technological change would result in electrical performance that is equal to or better than the electrical performance expected prior to the technological change and would not cause any reliability concerns (i.e., materially impact the transmission system with regard to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response).³¹⁴ 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 *pro forma* LGIP provisions. We clarify that information regarding electrical performance submitted by the interconnection customer is an input into the technological change study and that this factor alone is not determinative of whether a proposed technological change is a material modification. We also clarify that the determination of whether a proposed technological

³¹³ Order No. 845, 163 FERC ¶ 61,043 at P 519.

³¹⁴ *Id.* P 520.

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.³¹⁵ Accordingly, the final decision as to whether or not a proposed technological change is a material modification will remain with the transmission provider. Consistent with Order No. 845, the transmission provider must make such a determination no more than 30 days after an interconnection customer submits a formal technological change request.³¹⁶

J. Process Concerns

1. Compliance and Effective Dates

156. Order No. 845 was issued in the Federal Register on May 9, 2018, and its effective date was seventy-five days after that, or July 23, 2018. In Order No. 845, the Commission stated that all public utility transmission providers were to submit compliance filings to adopt the requirements of Order No. 845 “as revisions to the LGIP and LGIA in their [Open Access Transmission Tariffs (OATT)] no later than 90 days after the issuance of” Order No. 845 in the Federal Register.³¹⁷

³¹⁵ Order No. 2003, 104 FERC ¶ 61,103 at P 166.

³¹⁶ Order No. 845, 163 FERC ¶ 61,043 at P 535.

³¹⁷ *Id.* P 555.

a. Motions for Extension of Time

157. The ISO/RTO Council³¹⁸ and Southern filed motions to extend the compliance date of Order No. 845. The ISO/RTO Council requested that the Commission extend the compliance deadline by seventy days to October 16, 2018.³¹⁹ The New England Power Pool Participants Committee filed comments in support of this motion. Southern requested that the Commission extend the compliance period to a total of 180 days so that the compliance filing deadline would be November 5, 2018.³²⁰ On June 1, 2018, the Office of the Secretary issued a notice extending the compliance deadline to November 5, 2018.³²¹

158. On September 24, 2018, EEI submitted a motion requesting an extension of the compliance deadline for Order No. 845 up to and including ninety (90) days after the Commission's issuance of an order addressing the pending requests for rehearing of Order No. 845. On September 26, 2018, AWEA filed an answer in opposition to EEI's

³¹⁸ The ISO/RTO Council is comprised of the Alberta Electric System Operator (AESO), CAISO, the Electric Reliability Council of Texas, Inc. (ERCOT), the Independent Electricity System Operator (IESO), ISO-NE, MISO, NYISO, PJM, and Southwest Power Pool, Inc. AESO, ERCOT, and IESO are not Commission-jurisdictional public utilities and did not join in this motion.

³¹⁹ ISO/RTO Council May 17, 2018 Motion to Extend the Time Period to Comply at 1.

³²⁰ Southern May 22, 2018 Motion to Extend the Period of Time to Comply at 1.

³²¹ Notice of Extension of Compliance Date, Docket No. RM17-8-000 (June 1, 2018).

motion. On October 3, 2018, the Office of the Secretary issued a notice granting EEI's motion and requiring that transmission providers submit the compliance filings directed in Order No. 845 within ninety days of the Commission's issuance of this order.³²²

b. Requests for Rehearing and Clarification

159. Duke and EEI request rehearing of the Commission's decision to establish an effective date seventy-five days after publication in the Federal Register and a compliance deadline ninety days after publication. Duke argues that Order No. 845 "represents the most significant change to the generator interconnection process . . . since Order No. 2003" and that the Commission should therefore grant rehearing and establish an effective date and compliance deadline of November 5, 2018, 180 days after publication in the Federal Register.³²³

160. Duke and EEI also argue that the Commission erred by failing to justify the variation in the compliance and effective date, arguing that this failure to align the dates is arbitrary and capricious because it departs from the NOPR proposal and past precedent.³²⁴ EEI argues that having an effective date in advance of the compliance date

³²² Notice of Extension of Compliance Date, Docket No. RM17-8-000 (Oct. 3, 2018). On October 15, 2018, AWEA requested rehearing of this notice, which the Commission dismissed in a November 13, 2018 order. *Reform of Generator Interconnection Procedures and Agreements*, 165 FERC ¶ 61,090 (2018).

³²³ Duke Rehearing Request at 8-9; *see also* EEI Rehearing Request at 21. EEI also states that it does not object to the ISO/RTO Council's request for an additional 70 days for the compliance period.

³²⁴ Duke Rehearing Request at 10; EEI Rehearing Request at 21.

creates regulatory uncertainty as to the provisions that are in effect.³²⁵ Duke states that the NOPR proposed to require each public utility to submit a compliance filing “within 90 days of the effective date of the final rule” but that it was silent with regard to a proposed effective date.³²⁶

c. Determination

161. We deny rehearing regarding the compliance deadline for Order No. 845. Duke and EEI’s arguments as to the original compliance filing set forth in Order No. 845 are moot in light of the October 3, 2018 notice, which extended the compliance deadline until ninety days after the issuance of this order. We also deny Duke’s and EEI’s requests for rehearing regarding the effective date. In response to the arguments that the compliance date and effective date should align, we note that there is no such statutory or regulatory requirement and that the Commission has previously required effective dates that do not coincide with compliance deadlines.³²⁷ Further, we remind Duke and EEI that the effective date is the effective date of Order No. 845 itself.

³²⁵ EEI Rehearing Request at 21.

³²⁶ Duke Rehearing Request at 9.

³²⁷ *See, e.g.*, Order No. 841, 162 FERC ¶ 61,127 at P 344 (effective date within 90 days of publication in the Federal Register and compliance deadline within 270 days of publication in the Federal Register); *see also Standards of Conduct for Transmission Providers*, 125 FERC ¶ 61,291, at P 2 (2008) (stating that Order No. 717 would become effective 30 days after publication in the Federal Register and that transmission providers must be in full compliance no later than 60 days from publication in the Federal Register).

162. Nonetheless, in light of the confusion created by the multiple motions and rehearing requests that pertain to the compliance deadline and effective dates, we provide guidance regarding the compliance process and the effective dates of the LGIP/LGIA and *forma* LGIP/LGIA revisions required by Order No. 845 and Order No. 845-A. The effective date of Order No. 845 was July 23, 2018 (75 days after its publication in the Federal Register). The effective date of this order (Order No. 845-A) will be 75 days after the publication of this order in the Federal Register. Each public utility transmission provider must submit a single compliance filing within 90 days of the issuance of this order that includes revisions to its *pro forma* LGIP and *pro forma* LGIA necessary to comply with Order Nos. 845 and 845-A. Order No. 845 was silent regarding the effective date of the required tariff revisions, so we address such effective dates here. In doing so, we find that it is appropriate to follow the approach taken with regard to Order No. 2003 and its progeny as closely as possible. We describe that approach and the approach we are taking with regard to Order No. 845 and Order No. 845-A below.

163. The Commission issued Order No. 2003 on July 24, 2003. In response to requests to do so, the Commission extended the Order No. 2003 compliance deadline for RTOs/ISOs and non-RTO/ISO transmission providers to January 20, 2004.³²⁸ On January 8, 2004, the Office of the Secretary issued a notice clarifying the compliance procedures in the Order No. 2003 proceeding. The notice stated that all non-RTO/ISO

³²⁸ Notice Clarifying Compliance Procedures, Docket Nos. RM02-1-000 & RM02-1-001, at P 1 (Jan. 8, 2004).

transmission providers' tariffs were "deemed to include [the *pro forma* LGIP and the *pro forma* LGIA] on" the date of the compliance deadline and "directed [the non-RTO/ISO transmission providers] to make ministerial filings reflecting those revisions to their OATT[s] in their next filings with the Commission."³²⁹ 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."³³⁰

164. In Order No. 2003-A, the Commission deemed the non-RTO/ISO transmission providers' OATTs to "be revised to adopt [the revised] *pro forma* LGIA and LGIP on [Order No. 2003-A's] effective date" and directed all such transmission providers to make ministerial filings reflecting such revisions "upon their next filing(s) with the Commission."³³¹ For RTOs/ISOs, the Commission required each RTO/ISO to file "on or before the effective date of [the] Order on Rehearing either (1) a notice that it intends to adopt the [revised] *pro forma* LGIP and LGIA, or (2) new standard interconnection procedures and agreements developed according to Order No. 2003's 'independent entity variation' standard."³³² The Commission stated that, in "either event, the [RTOs'/ISOs']

³²⁹ *Id.* P 2.

³³⁰ *Id.* P 3.

³³¹ Order No. 2003-A, 106 FERC ¶ 61,220 at P 43.

³³² *Id.* P 49.

currently effective OATT will remain in effect pending any necessary Commission action.”³³³

165. For Order No. 2003-B, however, the Commission, in recognition that “it has taken longer than anticipated for all [non-RTO/ISO transmission providers] to make the necessary changes,” adopted a “different procedure.”³³⁴ The Commission once again deemed each non-RTO/ISO transmission provider’s tariff “to be amended to adopt the revisions . . . contained [in Order No. 2003-B] on the effective date of [that] order,” but the Commission required each non-RTO/ISO transmission providers to file an amendment to include such revisions within 60 days of Order No. 2003-B’s issuance.³³⁵ The Commission also required each RTO/ISO to submit revised tariff sheets with 60 days of Order No. 2003-B’s issuance.³³⁶ For Order No. 2003-C, the Commission deemed each non-RTO/ISO transmission provider’s tariff “to be amended to adopt the [Order No. 2003-C revisions] 30 days after the issuance of [that] order” and required each non-RTO/ISO transmission provider to “amend its OATT to include the [new] clarifications . . . within 60 days after issuance of” Order No. 2003-C.³³⁷

³³³ *Id.* P 51.

³³⁴ Order No. 2003-B, 109 FERC ¶ 61,287 at P 139.

³³⁵ *Id.* P 4.

³³⁶ *Id.* P 139.

³³⁷ Order No. 2003-C, 111 FERC ¶ 61,401 at P 3.

166. Because the Commission is only requiring a single compliance filing from transmission providers to comply with the combined requirements of Order Nos. 845 and Order No. 845-A, the effective date for each compliance filing's proposed tariff revisions should be the same date. Consistent with the distinction made by Order No. 2003 and its progeny regarding the compliance requirements for non-RTO/ISO transmission providers and RTOs/ISOs, we will deem the tariff provisions to be effective for non-RTO/ISO transmission providers on the effective date of this order (seventy-five days from publication in the Federal Register) or the compliance deadline (ninety days from the issuance of this order), *whichever is later*, and we require each non-RTO/ISO transmission provider to file an amendment to their tariffs to include such provisions by the compliance deadline (ninety days from the issuance of this order). For each RTO/ISO, the effective date of the proposed revisions shall be the date established in the Commission's order accepting that RTO's/ISO's compliance filing, which will be no earlier than the issuance date of such an order.

K. Interconnection Request Withdrawals

167. In Order No. 845, the Commission recognized that, in addition to significant interconnection queue backlogs and long timelines, in some regions, there is a "recurring problem of late-stage interconnection request withdrawals that lead to interconnection restudies and consequent delays for lower-queued interconnection customers."³³⁸ The

³³⁸ Order No. 845, 163 FERC ¶ 61,043 at P 24.

Commission stated, however, that the reforms adopted in Order No. 845 “will benefit both interconnection customers and transmission providers.”³³⁹

1. Requests for Rehearing and Clarification

168. Southern contends that Order No. 845 fails to address delays and inefficiencies caused by “speculative” interconnection requests.³⁴⁰ It argues that, currently, a speculative interconnection customer can “sit in the queue for years” and withdraw “at the last moment.”³⁴¹ Southern asserts that this is a cause for concern because, since 2014, interconnection customers have suspended or terminated (at their request) half the interconnection agreements executed under Southern’s OATT. Southern asserts, however, that, while the Commission acknowledges this concern, Order No. 845 “fails to address solutions on the customer side.”³⁴² Southern further objects to Order No. 845’s imposition of requirements on transmission providers to provide additional information and flexibility, because such revisions “do little to nothing to address” the problem of speculative generation.³⁴³ Southern states further that Order No. 845 therefore “fails to make a rational connection with the underlying problem caused not by transmission providers, but by speculative interconnection customers” and that is therefore “arbitrary

³³⁹ *Id.* P 2.

³⁴⁰ Southern Rehearing Request at 3-6.

³⁴¹ *Id.* at 3-4.

³⁴² *Id.* at 5.

³⁴³ *Id.*

and capricious.”³⁴⁴ Similarly, MISO TOs argue that, with regard to the option the build, the Commission failed to “meaningfully respond” to assertions that the main reason for increased costs, delays, and cost uncertainty are late-stage withdrawals and that this omission renders the Commission’s findings “arbitrary, capricious, and inconsistent with reasoned decision-making.”³⁴⁵

2. Determination

169. We deny Southern’s and MISO TOs requests for rehearing on this issue. Regarding the issue of speculative projects, we note that the Commission designed some of the Order No. 845 reforms to provide more and better information so that interconnection customers will be more likely to submit interconnection requests that achieve commercial operation. For instance, the purpose of the reform on transparency regarding study models and assumptions is to reduce the likelihood that interconnection customers will submit multiple interconnection requests to figure out which request has the most suitable point of interconnection. Thus, this reform will likely result in more accurate and informed decision-making by the interconnection customer, which will, in turn, reduce the likelihood of late-stage withdrawals.³⁴⁶ For this reason, we continue to find that, on balance, the reforms adopted by Order No. 845 will improve the

³⁴⁴ *Id.* at 5-6.

³⁴⁵ MISO TOs Rehearing Request at 11 (citing *Motor Vehicle Mfrs.*, 463 U.S. at 41, 43; *Ameren*, 880 F.3d at 581; *PSEG Energy & Trade LLC v. FERC*, 665 F.3d 203, 208, 210 (2011)).

³⁴⁶ See Order No. 845, 163 FERC ¶ 61,043 at P 239.

interconnection process for both interconnection customers and transmission providers. We also disagree with Southern's argument that the Commission's exercise of its discretion in developing Order No. 845's requirements was arbitrary and capricious. As the Commission has noted on other occasions, it has "broad discretion to choose how best to marshal its limited resources and personnel to carry out its delegated responsibilities" and therefore, the Commission is not required to expand this rulemaking proceeding to impose additional requirements upon interconnection customers.³⁴⁷

L. Wholesale Distribution Tariffs

1. Requests for Rehearing and Clarification

170. California Utilities request that the Commission clarify, as it did for the SGIA and SGIP, that the new requirements in Order No. 845 do not apply to wholesale distribution access tariffs (WDAT).³⁴⁸ California Utilities comment that the Commission did not directly address these issues as raised in comments by PG&E and SoCal Edison filed in response to the NOPR.³⁴⁹ In support of their request, California Utilities comment that, under their respective WDATs, they process a very small number of requests to

³⁴⁷ See, e.g., *Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719-A, 128 FERC ¶ 61,059, at P 118 (2009) (responding to a rehearing request arguing that the Commission "shirk[ed] its duty under the FPA in confining the scope of [the] proceeding to four specific areas of reform") (citing *Chevron U.S.A. v. Nat. Res. Def. Council*, 467 U.S. 837, 842-45 (1984)), *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009).

³⁴⁸ California Utilities Request for Clarification at 2.

³⁴⁹ *Id.*

interconnect wholesale generation projects to distribution facilities, which are radial in nature and not part of the CAISO-controlled grid.³⁵⁰

171. California Utilities state that the interconnection of wholesale generation to the distribution system may trigger the need for upgrades to the distribution system considered to be distribution facilities for purposes of the WDATs.³⁵¹ California Utilities note that the interconnection of wholesale generation to the distribution grid could also trigger an upstream need for reliability network upgrades on the CAISO-controlled grid but contend that there could not be stand alone network upgrades as defined under Order No. 845 for generation connected to the distribution system.³⁵² Therefore, the California Utilities argue, these limited projects should not subject the WDATs to these requirements, such as OASIS site postings, which do not exist for the California Utilities' distribution systems.³⁵³ California Utilities maintain that the administrative burden and costs of complying outweigh any benefits. Moreover, many of the proposed new requirements concern transmission information that is available on CAISO's website.³⁵⁴

³⁵⁰ *Id.*

³⁵¹ *Id.*

³⁵² *Id.*

³⁵³ *Id.*

³⁵⁴ *Id.*

Alternatively, California Utilities suggest that any potential reforms to the WDATs should be considered together in a separate rulemaking.³⁵⁵

2. Determination

172. We clarify that the requirements of Order No. 845 will not apply to WDATs at this time. We find that the distinct engineering and jurisdictional implications of an interconnection with a distribution system should be further evaluated before requiring California Utilities or other entities with a WDAT to apply the requirements of Order No. 845 to their WDATs.

III. Information Collection Statement

173. The Paperwork Reduction Act (PRA) provides that an agency may not conduct or sponsor the collection of information unless the agency has published an estimate of the burden that shall result from the information collection in advance of adopting or revising such collection. The Office of Management and Budget (OMB) requires that OMB approve certain information collection and data retention requirements imposed by agency rules.³⁵⁶ However, this order on rehearing contains no additional reporting requirements, and is, therefore, not subject to OMB approval. Moreover, the Commission submitted to OMB the information collection requirements arising from Order No. 845, and OMB approved those requirements. In this order, the Commission is making no substantive changes to those requirements, but has provided clarifications that

³⁵⁵ *Id.* at 4.

³⁵⁶ 5 CFR 1320.11(b) (2018).

requires no additional information. Therefore, the Commission does not find it necessary to make a formal submission to OMB for review and approval under section 3507(d) of the PRA. This order will be submitted to OMB for informational purposes only.

174. Interested persons may obtain information on the reporting requirements by contacting the following: Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426 [Attention: Ellen Brown, Office of the Executive Director], email: DataClearance@ferc.gov, phone: (202) 502-8663, fax: (202) 273-0873.

175. Comments concerning the collection of information and the associated burden estimate(s) in Order No. 845 should be sent to the Commission in this docket and may also be sent to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503 [Attention: Desk Officer for the Federal Energy Regulatory Commission].

176. Due to security concerns, comments should be sent electronically to the following email address: oira_submission@omb.eop.gov. Comments submitted to OMB should refer to Docket No. RM17-8-001.

IV. Regulatory Flexibility Act Certification

177. The Regulatory Flexibility Act of 1980 (RFA)³⁵⁷ generally requires a description and analysis of rules that will have significant economic impact on a substantial number of small entities. The RFA does not mandate any particular outcome in a rulemaking. It only requires consideration of regulatory alternatives that accomplish the stated

³⁵⁷ 5 U.S.C. 601-12 (2012).

objectives of a rule and that minimize any significant economic impact on a substantial number of small entities. The Commission has determined that Order No. 845 will not have a significant impact on a substantial number of small entities; therefore these requirements under the RFA do not apply.³⁵⁸

V. Document Availability

178. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through the Commission's Home Page (<http://www.ferc.gov>) and in the Commission's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington, DC 20426.

179. From the Commission's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number of this document, excluding the last three digits, in the docket number field.

180. User assistance is available for eLibrary and the Commission's website during normal business hours from the Commission's Online Support at (202) 502-6652 (toll free at 1-866-208-3676) or email at ferconlinesupport@ferc.gov, or the Public Reference

³⁵⁸ See Order No. 845, 163 FERC ¶ 61,043 at PP 564-65.

Room at (202) 502-8371, TTY (202) 502-8659. E-mail the Public Reference Room at public.referenceroom@ferc.gov.

VI. Effective Date

181. These regulations are effective [INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

By the Commission. Commissioner McNamee is not participating.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Note: Appendix A will not be published in the Federal Register.

Appendix A: List of Short Names of Entities that Filed Requests for Rehearing or Clarification

<u>Short Name or Acronym</u>	<u>Filer</u>
Ameren	Ameren Services Company
APS	Arizona Public Service Company
AWEA	American Wind Energy Association
California Utilities	Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company (jointly)
Duke	Duke Energy Corporation
EEl	Edison Electric Institute;
Generation Developers	E.ON Climate & Renewables North America, LLC, EDF Renewables, Inc., EDP Renewables North America LLC, and Enel Green Power North America, Inc. (jointly)
MISO TOs	MISO Transmission Owners ³⁵⁹

³⁵⁹ The MISO transmission owners that participated in MISO TOs' Rehearing Request consist of: Ameren Services Company, as agent for Ameren Missouri, Ameren Illinois, and Ameren Transmission Company of Illinois; American Transmission Company LLC; Big Rivers Electric Corporation; Central Minnesota Municipal Power Agency; City Water, Light & Power (Springfield, IL); Cleco Power LLC; Cooperative Energy; Dairyland Power Cooperative; Duke Energy Business Services, LLC for Duke Energy Indiana, LLC; East Texas Electric Cooperative; Entergy Arkansas, Inc.; Entergy Louisiana, LLC; Entergy Mississippi, Inc.; Entergy New Orleans, LLC; Entergy Texas, Inc.; Great River Energy; Hoosier Energy Rural Electric Cooperative, Inc.; Indiana Municipal Power Agency; Indianapolis Power & Light Company; ITC Transmission; ITC Midwest LLC; Michigan Electric Transmission Company, LLC; MidAmerican Energy Company; Minnesota Power (and its subsidiary Superior Water, L&P); Missouri River Energy Services; Montana-Dakota Utilities Co.; Northern Indiana Public Service

NYISO	New York Independent System Operator, Inc.
Non-Profit Utility Trade Associations	American Public Power Association, Large Public Power Council, and National Rural Electric Cooperative Association (jointly)
PG&E	Pacific Gas and Electric Company
SoCal Edison	Southern California Edison Company
Southern	Southern Company Services, Inc.

Company LLC; Northern States Power Company, a Minnesota corporation, and Northern States Power Company, a Wisconsin corporation, subsidiaries of Xcel Energy Inc.; Northwestern Wisconsin Electric Company; Otter Tail Power Company; Prairie Power Inc.; Southern Illinois Power Cooperative; Vectren Energy Delivery of Indiana; Southern Minnesota Municipal Power Agency; Wabash Valley Power Association, Inc.; and Wolverine Power Supply Cooperative, Inc.

Note: Appendix B will not be published in the Federal Register. Square brackets indicate that the text should be filled in as appropriate by the transmission provider.

Appendix B: Compilation of Final Rule Changes to the *Pro Forma* LGIP Made by Order No. 845 and Order No 845-A

The Commission modifies the following sections of the *pro forma* LGIP as indicated below:

Section 1. Definitions

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 Re-Studies of the Interconnection Request or a reassessment of the Interconnection Facilities and/or Network Upgrades and/or costs and timing.

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.

Permissible Technological Advancement [Insert definition here].

Provisional Interconnection Service shall mean Interconnection Service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Provisional Large Generator Interconnection Agreement and, if applicable, the Tariff.

Provisional Large Generator Interconnection Agreement shall mean the interconnection agreement for Provisional Interconnection Service established between Transmission Provider and/or the Transmission Owner and the

Interconnection Customer. This agreement shall take the form of the Large Generator Interconnection Agreement, modified for provisional purposes.

Stand Alone Network Upgrades shall mean Network Upgrades that are not part of an Affected System 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. If the Transmission Provider and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Provider must provide the Interconnection Customer a written technical explanation outlining why the Transmission Provider does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

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

2.3 Base Case Data.

Base Case Data. Transmission Provider shall maintain ~~provide~~ base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list on either its OASIS site or a password-protected website, upon request subject to confidentiality provisions in LGIP Section 13.1. In addition, Transmission Provider shall maintain network models and underlying assumptions on either its OASIS site or a password-protected website. Such network models and underlying assumptions should reasonably represent those used during the most recent interconnection study and be representative of current system conditions. If

Transmission Provider posts this information on a password-protected website, a link to the information must be provided on Transmission Provider's OASIS site. Transmission Provider is permitted to require that Interconnection Customers, OASIS site users and password-protected website users sign a confidentiality agreement before the release of commercially sensitive information or Critical Energy Infrastructure Information in the Base Case data. Such databases and lists, hereinafter referred to as Base Cases, shall include all (1) generation projects and (2) transmission projects, including merchant transmission projects that are proposed for the Transmission System for which a transmission expansion plan has been submitted and approved by the applicable authority.

3.1 General

An Interconnection Customer shall submit to Transmission Provider an Interconnection Request in the form of Appendix 1 to this LGIP and a refundable deposit of \$10,000. Transmission Provider shall apply the deposit toward the cost of an Interconnection Feasibility Study. Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

At Interconnection Customer's option, Transmission Provider and Interconnection Customer will identify alternative Point(s) of Interconnection and configurations at the Scoping Meeting to evaluate in this process and attempt to eliminate alternatives in a reasonable fashion given resources and information available. Interconnection Customer will select the definitive Point(s) of Interconnection to be studied no later than the execution of the Interconnection Feasibility Study Agreement.

Transmission Provider shall have a process in place to consider requests for Interconnection Service below the Generating Facility Capacity. These requests for Interconnection Service shall be studied at the level of Interconnection Service

requested for purposes of Interconnection Facilities and Network Upgrades, but may be subject to other studies at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by the Interconnection Customer. If after the additional studies are complete, Transmission Provider determines that additional Network Upgrades are necessary, then Transmission Provider must: (1) specify which additional Network Upgrade costs are based on which studies; and (2) provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrade costs required for safety and reliability also will be borne by the Interconnection Customer. Interconnection Customers may be subject to additional control technologies as well as testing and validation of those technologies consistent with Article 6 of the LGIA. The necessary control technologies and protection systems shall be established in Appendix C of the executed, or requested to be filed unexecuted, LGIA.

3.3 Utilization of Surplus Interconnection Service.

Transmission Provider must provide a process that allows an Interconnection Customer to utilize or transfer Surplus Interconnection Service at an existing Point of Interconnection. The original Interconnection Customer or one of its affiliates shall have priority to utilize Surplus Interconnection Service. If the existing Interconnection Customer or one of its affiliates does not exercise its priority, then that service may be made available to other potential Interconnection Customers.

3.3.1 Surplus Interconnection Service Requests.

Surplus Interconnection Service requests may be made by the existing Interconnection Customer whose Generating Facility is already interconnected or one of its affiliates. Surplus Interconnection Service requests also may be made by another Interconnection Customer. Transmission Provider shall provide a process for evaluating Interconnection Requests for Surplus Interconnection Service. Studies for Surplus Interconnection Service shall consist of reactive power, short circuit/fault duty, stability analyses, and any other appropriate studies. Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied. If the Surplus Interconnection Service was not studied under off-peak conditions, off-peak steady state analyses shall be performed to the required level

necessary to demonstrate reliable operation of the Surplus Interconnection Service. If the original System Impact Study is not available for the Surplus Interconnection Service, both off-peak and peak analysis may need to be performed for the existing Generating Facility associated with the request for Surplus Interconnection Service. The reactive power, short circuit/fault duty, stability, and steady-state analyses for Surplus Interconnection Service will identify any additional Interconnection Facilities and/or Network Upgrades necessary.

3.34 Valid Interconnection Request.

3.34.1 Initiating an Interconnection Request.

3.34.2 Acknowledgement of Interconnection Request.

3.43.5.1 OASIS Posting.

3.5.2 Transmission Provider will maintain on its OASIS or its website summary statistics related to processing Interconnection Studies pursuant to Interconnection Requests, updated quarterly. If Transmission Provider posts this information on its website, a link to the information must be provided on Transmission Provider's OASIS site. For each calendar quarter, Transmission Providers must calculate and post the information detailed in sections 3.5.2.1 through 3.5.2.4.

3.5.2.1 Interconnection Feasibility Studies processing time.

(A) Number of Interconnection Requests that had Interconnection Feasibility Studies completed within Transmission Provider's coordinated region during the reporting quarter.

(B) Number of Interconnection Requests that had Interconnection Feasibility Studies completed within Transmission Provider's coordinated region during the reporting quarter that were completed more than [timeline as listed in Transmission Provider's LGIP] after receipt by Transmission Provider of the Interconnection Customer's executed Interconnection Feasibility Study Agreement.

(C) At the end of the reporting quarter, the number of active valid Interconnection Requests with ongoing incomplete Interconnection Feasibility Studies where such Interconnection Requests had executed Interconnection Feasibility Study Agreements received by Transmission Provider more than [timeline as listed in Transmission Provider's LGIP] before the reporting quarter end,

(D) Mean time (in days), Interconnection Feasibility Studies completed within Transmission Provider's coordinated region during the reporting quarter, from the date when Transmission Provider received the executed Interconnection Feasibility Study Agreement to the date when Transmission Provider provided the completed Interconnection Feasibility Study to the Interconnection Customer,

(E) Percentage of Interconnection Feasibility Studies exceeding [timeline as listed in Transmission Provider's LGIP] to complete this reporting quarter, calculated as the sum of 3.5.2.1(B) plus 3.5.2.1(C) divided by the sum of 3.5.2.1(A) plus 3.5.2.1(C).

3.5.2.2 Interconnection System Impact Studies Processing Time.

(A) Number of Interconnection Requests that had Interconnection System Impact Studies completed within Transmission Provider's coordinated region during the reporting quarter,

(B) Number of Interconnection Requests that had Interconnection System Impact Studies completed within Transmission Provider's coordinated region during the reporting quarter that were completed more than [timeline as listed in Transmission Provider's LGIP] after receipt by Transmission Provider of the Interconnection Customer's executed Interconnection System Impact Study Agreement,

(C) At the end of the reporting quarter, the number of active valid Interconnection Requests with ongoing incomplete System Impact Studies where such Interconnection Requests had executed Interconnection System Impact Study Agreements received by Transmission Provider more than [timeline as listed in Transmission Provider's LGIP] before the reporting quarter end.

(D) Mean time (in days), Interconnection System Impact Studies completed within Transmission Provider's coordinated region during the reporting quarter, from the date when Transmission Provider received the executed Interconnection System Impact Study Agreement to the date when Transmission Provider provided the completed Interconnection System Impact Study to the Interconnection Customer,

(E) Percentage of Interconnection System Impact Studies exceeding [timeline as listed in Transmission Provider's LGIP] to complete this reporting quarter, calculated as the sum of 3.5.2.2(B) plus 3.5.2.2(C) divided by the sum of 3.5.2.2(A) plus 3.5.2.2(C)).

3.5.2.3 Interconnection Facilities Studies Processing Time.

(A) Number of Interconnection Requests that had Interconnection Facilities Studies that are completed within Transmission Provider's coordinated region during the reporting quarter.

(B) Number of Interconnection Requests that had Interconnection Facilities Studies that are completed within Transmission Provider's coordinated region during the reporting quarter that were completed more than [timeline as listed in Transmission Provider's LGIP] after receipt by Transmission Provider of the Interconnection Customer's executed Interconnection Facilities Study Agreement.

(C) At the end of the reporting quarter, the number of active valid Interconnection Service requests with ongoing incomplete Interconnection Facilities Studies where such Interconnection Requests had executed Interconnection Facilities Studies Agreement received by Transmission Provider more than [timeline as listed in Transmission Provider's LGIP] before the reporting quarter end,

(D) Mean time (in days), for Interconnection Facilities Studies completed within Transmission Provider's coordinated region during the reporting quarter, calculated from the date when Transmission Provider received the executed Interconnection Facilities Study Agreement to the date when Transmission Provider provided the completed Interconnection Facilities Study to the Interconnection Customer,

(E) Percentage of delayed Interconnection Facilities Studies this reporting quarter, calculated as the sum of 3.5.2.3(B) plus 3.5.2.3(C) divided by the sum of 3.5.2.3(A) plus 3.5.2.3(C)).

3.5.2.4 Interconnection Service Requests Withdrawn from Interconnection Queue.

(A) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter,

(B) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before completion of any interconnection studies or execution of any interconnection study agreements,

(C) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before completion of an Interconnection System Impact Study,

(D) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue during the reporting quarter before completion of an Interconnection Facilities Study.

(E) Number of Interconnection Requests withdrawn from Transmission Provider's interconnection queue after execution of a generator interconnection agreement or Interconnection Customer requests the filing of an unexecuted, new interconnection agreement.

(F) Mean time (in days), for all withdrawn Interconnection Requests, from the date when the request was determined to be valid to when Transmission Provider received the request to withdraw from the queue.

3.5.3 Transmission Provider is required to post on OASIS or its website the measures in paragraph 3.5.2.1(A) through paragraph 3.5.2.4(F) for each calendar quarter within 30 days of the end of the calendar quarter. Transmission Provider will keep the quarterly measures posted on OASIS or its website for three calendar years with the first required report to be in the first quarter of 2020. If Transmission Provider retains this information on its website, a link to the information must be provided on Transmission Provider's OASIS site.

3.5.4 In the event that any of the values calculated in paragraphs 3.5.2.1(E), 3.5.2.2(E) or 3.5.2.3(E) exceeds 25 percent for two consecutive calendar quarters, Transmission Provider will have to comply with the measures below for the next four consecutive calendar quarters and must continue reporting this information until Transmission Provider reports four consecutive calendar quarters without the values calculated in 3.5.2.1(E), 3.5.2.2(E) or 3.5.2.3(E) exceeding 25 percent for two consecutive calendar quarters:

(i) Transmission Provider must submit a report to the Commission describing the reason for each study or group of clustered studies pursuant

to an Interconnection Request that exceeded its deadline (i.e., 45, 90 or 180 days) for completion (excluding any allowance for Reasonable Efforts). Transmission Provider must describe the reasons for each study delay and any steps taken to remedy these specific issues and, if applicable, prevent such delays in the future. The report must be filed at the Commission within 45 days of the end of the calendar quarter.

(ii) Transmission Provider shall aggregate the total number of employee-hours and third party consultant hours expended towards interconnection studies within its coordinated region that quarter and post on OASIS or its website. If Transmission Provider posts this information on its website, a link to the information must be provided on Transmission Provider's OASIS site. This information is to be posted within 30 days of the end of the calendar quarter.

3.56 Coordination with Affected Systems.

3.67 Withdrawal.

3.8 Identification of Contingent Facilities. Transmission Provider shall post in this section a method for identifying the Contingent Facilities to be provided to Interconnection Customer at the conclusion of the System Impact Study and included in Interconnection Customer's Large Generator Interconnection Agreement. The method shall be sufficiently transparent to determine why a specific Contingent Facility was identified and how it relates to the Interconnection Request. Transmission Provider shall also provide, upon request of the Interconnection Customer, the estimated Interconnection Facility and/or Network Upgrade costs and estimated in-service completion time of each identified Contingent Facility when this information is readily available and not commercially sensitive.

4.4.1 Prior to the return of the executed Interconnection System Impact Study Agreement to Transmission Provider, modifications permitted under this Section shall include specifically: (a) a decrease of up to 60 percent of electrical output (MW) of the proposed project, through either (1) a

decrease in plant size or (2) a decrease in Interconnection Service level (consistent with the process described in Section 3.1) accomplished by applying Transmission Provider-approved injection-limiting equipment; (b) modifying the technical parameters associated with the Large Generating Facility technology or the Large Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration. For plant increases, the incremental increase in plant output will go to the end of the queue for the purposes of cost allocation and study analysis.

4.4.2 Prior to the return of the executed Interconnection Facilities Study Agreement to the Transmission Provider, the modifications permitted under this Section shall include specifically: (a) additional 15 percent decrease of electrical output of the proposed project through either (1) a decrease in plant size (MW) or (2) a decrease in Interconnection Service level (consistent with the process described in Section 3.1) accomplished by applying Transmission Provider-approved injection-limiting equipment;; ~~and~~ (b) Large Generating Facility technical parameters associated with modifications to Large Generating Facility technology and transformer impedances; provided, however, the incremental costs associated with those modifications are the responsibility of the requesting Interconnection Customer; and (c) a Permissible Technological Advancement for the Large Generating Facility after the submission of the Interconnection Request. Section 4.4.4 specifies a separate technological change procedure including the requisite information and process that will be followed to assess whether the Interconnection Customer's proposed technological advancement under Section 4.4.2(c) is a Material Modification. Section 1 contains a definition of Permissible Technological Advancement.

4.4.4 Technological Change Procedure.

[Insert technological change procedure here].

6.3 Interconnection Feasibility Study Procedures.

Transmission Provider shall utilize existing studies to the extent practicable when it performs the study. Transmission Provider shall use Reasonable Efforts to complete the Interconnection Feasibility Study no later than forty-five (45) Calendar Days after Transmission Provider receives the fully executed Interconnection Feasibility Study Agreement. At the request of Interconnection Customer or at any time Transmission Provider determines that it will not meet the required time frame for completing the Interconnection Feasibility Study, Transmission Provider shall notify Interconnection Customer as to the schedule status of the Interconnection Feasibility Study. If Transmission Provider is unable to complete the Interconnection Feasibility Study within that time period, it shall notify Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required. Upon request, Transmission Provider shall provide Interconnection Customer supporting documentation, workpapers and relevant power flow, short circuit and stability databases for the Interconnection Feasibility Study, subject to confidentiality arrangements consistent with Section 13.1.

Transmission Provider shall study the Interconnection Request at the level of service requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns.

7.3 Scope of Interconnection System Impact Study.

The Interconnection System Impact Study shall evaluate the impact of the proposed interconnection on the reliability of the Transmission System. The Interconnection System Impact Study will consider the Base Case as well as all generating facilities (and with respect to (iii) below, any identified Network Upgrades associated with such higher queued interconnection) that, on the date the Interconnection System Impact Study is commenced: (i) are directly interconnected to the Transmission System; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending higher queued Interconnection Request to interconnect to the Transmission System; and (iv) have no Queue Position but have executed an LGIA or requested that an unexecuted LGIA be filed with FERC.

The Interconnection System Impact Study will consist of a short circuit analysis, a stability analysis, and a power flow analysis. The Interconnection System Impact Study will state the assumptions upon which it is based; state the results of the analyses; and provide the requirements or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. For purposes of determining necessary Interconnection Facilities and Network Upgrades, the System Impact Study shall consider the level of Interconnection Service requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns. The Interconnection System Impact Study will provide a list of facilities that are required as a result of the Interconnection Request and a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

8.2 Scope of Interconnection Facilities Study.

The Interconnection Facilities Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Interconnection Facility to the Transmission System. The Interconnection Facilities Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Transmission Provider's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities. The Facilities Study will also identify any potential control equipment for requests for Interconnection Service that are lower than the Generating Facility Capacity.

13.5.5 Non-binding dispute resolution procedures. If a Party has submitted a Notice of Dispute pursuant to section 13.5.1, and the Parties are unable to

resolve the claim or dispute through unassisted or assisted negotiations within the thirty (30) Calendar Days provided in that section, and the Parties cannot reach mutual agreement to pursue the section 13.5 arbitration process, a Party may request that Transmission Provider engage in Non-binding Dispute Resolution pursuant to this section by providing written notice to Transmission Provider (“Request for Non-binding Dispute Resolution”). Conversely, either Party may file a Request for Non-binding Dispute Resolution pursuant to this section without first seeking mutual agreement to pursue the section 13.5 arbitration process. The process in section 13.5.5 shall serve as an alternative to, and not a replacement of, the section 13.5 arbitration process. Pursuant to this process, a Transmission Provider must within 30 days of receipt of the Request for Non-binding Dispute Resolution appoint a neutral decision-maker that is an independent subcontractor that shall not have any current or past substantial business or financial relationships with either Party. Unless otherwise agreed by the Parties, the decision-maker shall render a decision within sixty (60) Calendar Days of appointment and shall notify the Parties in writing of such decision and reasons therefore. This decision-maker shall be authorized only to interpret and apply the provisions of the LGIP and LGIA and shall have no power to modify or change any provision of the LGIP and LGIA in any manner. The result reached in this process is not binding, but, unless otherwise agreed, the Parties may cite the record and decision in the non-binding dispute resolution process in future dispute resolution processes, including in a section 13.5 arbitration, or in a Federal Power Act section 206 complaint. Each Party shall be responsible for its own costs incurred during the process and the cost of the decision-maker shall be divided equally among each Party to the dispute.

Appendix 1 to LGIP

5.

- h.** Requested capacity (in MW) of Interconnection Service (if lower than the Generating Facility Capacity).

NOTE: Appendix C will not be published in the Federal Register. Square brackets indicate that the text should be filled in as appropriate by the transmission provider.

Appendix C: Compilation of Final Rule Changes to the *Pro Forma* LGIA Made by Order No. 845 and Order No. 845-A

The Commission modifies the following sections of the *pro forma* LGIA as indicated below:

Article 1. Definitions.

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.

Provisional Interconnection Service shall mean Interconnection Service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Provisional Large Generator Interconnection Agreement and, if applicable, the Tariff.

Provisional Large Generator Interconnection Agreement shall mean the interconnection agreement for Provisional Interconnection Service established between Transmission Provider and/or the Transmission Owner and the Interconnection Customer. This agreement shall take the form of the Large Generator Interconnection Agreement, modified for provisional purposes.

Stand Alone Network Upgrades shall mean Network Upgrades that are not part of an Affected System 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. If the Transmission Provider and Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the Transmission Provider must provide the Interconnection Customer a written technical explanation outlining why the Transmission Provider does not consider

the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

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

5.1 Options. Unless otherwise mutually agreed to between the Parties, Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Standard Option or Alternate Option set forth below for completion of Transmission Provider's Interconnection Facilities and Network Upgrades, as set forth in Appendix A, Interconnection Facilities and Network Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones. At the same time, Interconnection Customer shall indicate whether it elects to exercise the Option to Build set forth in Article 5.1.3 below. If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days. Upon receipt of the notification that Interconnection Customer's designated dates are not acceptable to Transmission Provider, the Interconnection Customer shall notify Transmission Provider within thirty (30) Calendar Days whether it elects to exercise the Option to Build if it has not already elected to exercise the Option to Build.

5.1.3 Option to Build. ~~If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, Transmission Provider shall so notify Interconnection Customer within thirty (30) Calendar Days and unless the Parties agree otherwise, Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades on the dates specified in Article 5.1.2. Transmission Provider and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A. Except for Stand Alone Network Upgrades, Interconnection Customer shall have no right to construct Network Upgrades under this option.~~

5.1.4 Negotiated Option. ~~If Interconnection Customer elects not to exercise its option~~

~~under Article 5.1.3, Option to Build, Interconnection Customer shall so notify Transmission Provider within thirty (30) Calendar Days, and If the dates designated by Interconnection Customer are not acceptable to Transmission Provider, the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives, or the procurement and construction of a portion of Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades by Interconnection Customer all facilities other than Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build under Article 5.1.3) pursuant to which Transmission Provider is responsible for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1 (Standard Option), Transmission Provider shall assume responsibility for the design, procurement and construction of Transmission Provider's Interconnection Facilities and Network Upgrades all facilities other than Transmission Provider's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build pursuant to article 5.1.1, Standard Option.~~

5.2 General Conditions Applicable to Option to Build.

~~(12) If Interconnection Customer exercises the Option to Build pursuant to Article 5.1.3, Interconnection Customer shall pay Transmission Provider the agreed upon amount of [\$ PLACEHOLDER] for Transmission Provider to execute the responsibilities enumerated to Transmission Provider under Article 5.2. Transmission Provider shall invoice Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.~~

5.9 ~~Limited Operation~~ Other Interconnection Options.

5.9.1 Limited Operation.

5.9.2 Provisional Interconnection Service. Upon the request of Interconnection Customer, and prior to completion of requisite Interconnection Facilities, Network Upgrades, Distribution Upgrades, or System Protection Facilities Transmission Provider may execute a Provisional Large Generator Interconnection Agreement or Interconnection Customer may request the filing of an unexecuted Provisional Large Generator Interconnection

Agreement with the Interconnection Customer for limited Interconnection Service at the discretion of Transmission Provider based upon an evaluation that will consider the results of available studies. Transmission Provider shall determine, through available studies or additional studies as necessary, whether stability, short circuit, thermal, and/or voltage issues would arise if Interconnection Customer interconnects without modifications to the Generating Facility or Transmission System. Transmission Provider shall determine whether any Interconnection Facilities, Network Upgrades, Distribution Upgrades, or System Protection Facilities that are necessary to meet the requirements of NERC, or any applicable Regional Entity for the interconnection of a new, modified and/or expanded Generating Facility are in place prior to the commencement of Interconnection Service from the Generating Facility. Where available studies indicate that such, Interconnection Facilities, Network Upgrades, Distribution Upgrades, and/or System Protection Facilities that are required for the interconnection of a new, modified and/or expanded Generating Facility are not currently in place, Transmission Provider will perform a study, at the Interconnection Customer's expense, to confirm the facilities that are required for Provisional Interconnection Service. The maximum permissible output of the Generating Facility in the Provisional Large Generator Interconnection Agreement shall be studied and updated [on a frequency determined by Transmission Provider and at the Interconnection Customer's expense]. Interconnection Customer assumes all risk and liabilities with respect to changes between the Provisional Large Generator Interconnection Agreement and the Large Generator Interconnection Agreement, including changes in output limits and Interconnection Facilities, Network Upgrades, Distribution Upgrades, and/or System Protection Facilities cost responsibilities.