

171 FERC ¶ 61,236
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Midcontinent Independent System Operator, Inc. Docket Nos. ER19-1823-002
ER19-1960-001
ER19-1960-002

ORDER ON REHEARING AND COMPLIANCE

(Issued June 18, 2020)

1. In a filing submitted on February 19, 2020 (February Compliance Filing), in Docket No. ER19-1960-002, MISO proposed revisions to its Open Access Transmission, Energy and Operating Reserve Markets Tariff (Tariff) in compliance with the requirements of Order Nos. 845 and 845-A¹ and the Commission's order on compliance issued on December 20, 2019.² On January 21, 2020, in Docket Nos. ER19-1960-001 and ER19-1823-002, the American Wind Energy Association (AWEA) filed a request for rehearing of the December 2019 Order. As discussed below, we find that the February Compliance Filing partially complies with the Commission's directives in the December 2019 Order. Accordingly, we accept the filing, effective December 20, 2019, and direct MISO to submit a further compliance filing within 120 days of the date of this order. We also deny AWEA's request for rehearing of the December 2019 Order.

I. Background

2. Order Nos. 845 and 845-A amended the Commission's *pro forma* Large Generator Interconnection Agreement (LGIA) and *pro forma* Large Generator Interconnection Procedures (LGIP) to improve certainty for interconnection customers, promote more informed interconnection decisions, and enhance the interconnection process. In Order

¹ *Reform of Generator Interconnection Procedures and Agreements*, Order No. 845, 163 FERC ¶ 61,043 (2018), *errata notice*, 167 FERC ¶ 61,123, *order on reh'g*, Order No. 845-A, 166 FERC ¶ 61,137, *errata notice*, 167 FERC ¶ 61,124, *order on reh'g*, Order No. 845-B, 168 FERC ¶ 61,092 (2019).

² *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,221 (2019) (December 2019 Order).

Nos. 845 and 845-A, the Commission adopted 10 different reforms to improve the interconnection process and required transmission providers to submit compliance filings to incorporate those reforms into their tariffs.

3. In the December 2019 Order, the Commission found that MISO's compliance filings partially complied with the directives of Order Nos. 845 and 845-A.³ The Commission directed further revisions to MISO's Generator Interconnection Procedures (GIP) contained in Attachment X of its Tariff, including revisions to its *pro forma* Generator Interconnection Agreement (GIA) contained in Appendix 1 of Attachment X, in the following areas of compliance: Interconnection Customer's Option to Build, Transparency Regarding Study Models and Assumptions, Identification and Definition of Contingent Facilities, Requesting Interconnection Service below Generating Facility Capacity, Provisional Interconnection Service, Surplus Interconnection Service, and Material Modifications and Incorporation of Advanced Technologies.⁴

II. Notice and Responsive Pleadings

4. Notice of the February Compliance Filing was published in the *Federal Register*, 85 Fed. Reg. 10,669 (Feb. 25, 2020), with interventions and protests due on or before March 11, 2020. Leeward Renewable Energy Development, LLC (Leeward) filed a timely motion to intervene and protest.

5. On May 1, 2020, MISO filed an answer to the protest. On May 22, 2020, Leeward filed an answer to MISO's answer.

III. Discussion

A. Procedural Matters

6. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2019), Leeward's timely, unopposed motion to intervene serves to make it a party to this proceeding.

7. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2019), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. We accept the answers filed in this proceeding because they have provided information that assisted us in our decision-making process.

³ *Id.* P 1.

⁴ *Id.* PP 53, 67-70, 74, 105-107, 114, 129, 141-142.

B. Substantive Matters**1. Request for Rehearing****a. Background**

8. In Order No. 845, the Commission revised the *pro forma* LGIA to allow interconnection customers to unilaterally exercise the option to build stand-alone network upgrades and the transmission provider's interconnection facilities, regardless of whether the transmission provider can complete construction of such facilities by the interconnection customer's proposed in-service date, initial synchronization date, or commercial operation date.⁵ In its Order No. 845 compliance filing, MISO requested an independent entity variation to reconcile the interconnection customer's unilateral ability to exercise the option to build stand-alone network upgrades with the MISO transmission owner's unilateral right to provide initial funding for network upgrades and then recover the interconnection customer's portion of these costs over time through network upgrade charges that include a return of capital and a return on capital investment.⁶ This unilateral right of MISO transmission owners to provide initial funding and earn a return of and on the cost of network upgrades is called transmission owner initial funding. MISO explained that, in *Ameren*, the D.C. Circuit required that MISO transmission owners be allowed to earn a return of, and on, the cost of network upgrades that the transmission owners must operate and maintain.⁷ MISO stated that, if an interconnection customer chooses the option to build and pays for stand-alone network upgrades, there is no capital for the transmission owner to recover the cost of, and hence, no capital to earn a return on, in contravention of *Ameren*. MISO therefore proposed a condition in

⁵ Order No. 845, 163 FERC ¶ 61,043 at PP 85-87. 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. *See Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 104 FERC ¶ 61,103, at P 353 (2003), *order on reh'g*, Order No. 2003-A, 106 FERC ¶ 61,220, *order on reh'g*, Order No. 2003-B, 109 FERC ¶ 61,287 (2004), *order on reh'g*, Order No. 2003-C, 111 FERC ¶ 61,401 (2005), *aff'd sub nom.*, *Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007).

⁶ MISO Order No. 845 Compliance Filing, Docket No. ER19-1960-000, Transmittal Letter at 10-11 (filed May 22, 2019) (citing *Ameren Services Co. v. FERC*, 880 F.3d 571 (D.C. Cir. 2018) (*Ameren*)). MISO requested an independent entity variation for stand-alone network upgrades only, not for transmission provider's interconnection facilities.

⁷ *Id.* at 12 (citing *Ameren*, 880 F.3d at 580-81).

article 5.2(13) of its *pro forma* GIA whereby, if an interconnection customer exercises the option to build stand-alone network upgrades, and the transmission owner elects to provide initial funding for those upgrades, the interconnection customer will invoice the transmission owner for the construction of the stand-alone network upgrades. The transmission owner will then reimburse the interconnection customer the full invoiced amount prior to the date when the interconnection customer transfers the stand alone network upgrades to the transmission owner, allowing the transmission owner to then recover a return on and of that reimbursed amount from the customer over the useful life of the upgrade.

9. In the December 2019 Order, the Commission accepted MISO's requested independent entity variation in article 5.2(13) of the *pro forma* GIA to reconcile the option to build with transmission owner initial funding (subject to a further compliance filing, as further discussed below).⁸ The Commission agreed with MISO that *Ameren* has implications for the option to build within MISO. The Commission acknowledged that stand-alone network upgrades are not different in any meaningful way from the MISO network upgrades that were the focus of the *Ameren* proceeding, including that "although they do not affect day-to-day operations of the transmission system, [they] will nevertheless become part of the MISO transmission owner's system and will be owned, operated, and maintained by the MISO transmission owner."⁹ The Commission found that MISO transmission owners should similarly have the right to provide up-front funding for, and earn a return on, stand-alone network upgrades.¹⁰ The Commission agreed with MISO that the option to build under Order No. 845, which would allow the interconnection customer to unilaterally elect to construct and pay for stand-alone network upgrades, would not allow MISO transmission owners to receive compensation for the risk of owning, operating, and maintaining those facilities.

10. The Commission disagreed with protesters' arguments that *Ameren* does not apply to stand-alone network upgrades because the option to build was not mentioned in the proceedings that led to, or the court's opinion in, *Ameren*.¹¹ The Commission stated that, while *Ameren* did not specifically contemplate the option to build provisions, *Ameren* did contemplate the financing mechanism for network upgrades. The Commission found that this financing mechanism applies equally to all types of network upgrades, including

⁸ December 2019 Order, 169 FERC ¶ 61,221 at P 46.

⁹ *Id.*

¹⁰ *Id.* P 47.

¹¹ *Id.* P 48.

stand-alone network upgrades, which the Commission found are simply a subset of the “Network Upgrades” contemplated under article 11.3 of MISO’s *pro forma* GIA.¹²

11. The Commission rejected arguments that MISO’s independent entity variation would not accomplish the purposes of Order Nos. 845 and 845-A because, protesters argued, the proposal would increase costs and negates potential savings. Protesters contended that, due to the transmission owner’s right to earn a return of and on stand-alone network upgrades under transmission owner initial funding, interconnection customers must pay significantly more for network upgrades than they would if they provided the initial funding.¹³ The Commission reiterated that MISO transmission owners have the right to elect to provide the initial funding for stand-alone network upgrades and earn a return on those upgrades. The Commission also noted that an interconnection customer might select the option to build because it could construct the stand-alone network upgrades itself for less money than the transmission owner could; thus, even though the interconnection customer would still have to pay a return on the cost of those upgrades to the transmission owner, the interconnection customer would pay a return on a lower initial amount. The Commission further noted that the interconnection customer might choose the option to build because it could construct the stand-alone network upgrades more quickly than the transmission owner, a benefit that is unaffected by whether or not the interconnection customer pays a return on those upgrades to the transmission owner. The Commission found that MISO’s proposed language in article 5.2(13) of its *pro forma* GIA accomplished the purposes of Order No. 845 by giving the interconnection customer the option to construct stand-alone network upgrades on its own timeline while preserving the rights of transmission owners to earn a return on network upgrades.

b. AWEA’s Request for Rehearing

12. AWEA argues that the Commission erred by allowing a variation that is inconsistent with the Commission’s findings and the goals of Order No. 845.¹⁴ AWEA represents that interconnection customers have had very little success exercising the option to build since the Commission issued Order No. 2003 and that the Commission, in

¹² *Id.* (citing MISO Tariff, Module A, § 1.S, “Stand Alone Network Upgrade” (111.0.0)).

¹³ *Id.* P 49.

¹⁴ AWEA Request for Rehearing at 4.

Order No. 845, intended to restore that right. AWEA contends that the December 2019 Order keeps in place these barriers to interconnection customers exercising the option to build.¹⁵

13. AWEA describes the Commission's acceptance of MISO's independent entity variation as directly contrary to the Commission's findings in Order Nos. 845 and 845-A.¹⁶ Specifically, AWEA portrays Order Nos. 845 and 845-A as permitting a transmission owner in MISO to follow the Order No. 2003 construct, which is also part of MISO's Tariff, and to earn a rate of return on the cost of stand-alone network upgrades by rolling the cost into the transmission owner's transmission rate base.¹⁷ According to AWEA, the option to build under this construct would entail reimbursing an interconnection customer with transmission credits. Therefore, AWEA states that MISO does not need to apply transmission owner initial funding to the option to build because transmission owners are not deprived of an opportunity to earn a return on the cost for such upgrades. AWEA states that the transmission owner should only have to roll into its rate base the interconnection customer's cost *after* the stand-alone network upgrade is completed and the transmission provider has provided credits to the interconnection customer. While the December 2019 Order required applying transmission owner initial funding to the option to build to be consistent with *Ameren's* requirement entitling a transmission owner to earn a return on network upgrades, AWEA asserts that Order No. 845, by contrast, did not require applying transmission owner initial funding to the option to build.¹⁸

14. AWEA argues that the Commission in the December 2019 Order erred in classifying stand-alone network upgrades as a subset of network upgrades that were subject to transmission owner initial funding in *Ameren*.¹⁹ First, AWEA states that the Court in *Ameren* only suggested that transmission owners might face risks and liability from customer-funded network upgrades, but it did not say so definitively. AWEA contends that the D.C. Circuit remanded the issue to the Commission for further consideration, and the Commission chose to impose transmission owner initial funding for network upgrades despite arguments that no evidence of such risks existed.²⁰

¹⁵ *Id.* at 4-5.

¹⁶ *Id.* at 5.

¹⁷ *Id.* at 6.

¹⁸ *Id.* at 6-7.

¹⁹ *Id.* at 7.

²⁰ *Id.* at 7-8.

Accordingly, AWEA argues that the Commission erred when it said that *Ameren* compels it to allow transmission owner initial funding for stand-alone network upgrades.²¹ Second, AWEA argues that the Commission erred by ignoring the record leading up to *Ameren*. AWEA states that the Commission proceedings underlying *Ameren* did not address whether the option to build covered stand-alone network upgrades.²² AWEA states that the definition of network upgrades in MISO's Tariff does not include stand-alone network upgrades, and AWEA views stand-alone network upgrades as being distinct from network upgrades under MISO's GIP. AWEA explains that this is because stand-alone network upgrades under article 11.3 of MISO's GIA do not affect the day-to-day operations of the transmission owner's system during their construction.²³

15. In addition, AWEA argues that, for the Commission to approve an independent entity variation, there must be independence.²⁴ AWEA argues that Order No. 2003 requires that, to qualify for an independent entity variation, a transmission provider must be less likely to act in an unduly discriminatory manner than a transmission provider that is a market participant. AWEA states that, under MISO's compliance filing, it is transmission owners, not MISO, that decide whether to apply transmission owner initial funding to stand alone network upgrades. Transmission owners, according to AWEA, are direct competitors of interconnection customers for building generation and selling power in the MISO market. AWEA states that interconnection customers that choose to exercise the option to build do so because it may be more cost- and time-effective than a transmission owner constructing stand-alone network upgrades.²⁵ AWEA contends that allowing transmission owners to elect transmission owner initial funding would enable the transmission owner to make a competitor interconnection customer's project uneconomical or untimely, thereby terminating the project. AWEA describes this mechanism as unduly discriminatory and preferential and thereby in violation of the

²¹ *Id.* at 8.

²² *Id.* at 8-9.

²³ *Id.* at 9-10.

²⁴ *Id.* at 11.

²⁵ *Id.* at 12.

Federal Power Act (FPA)²⁶ and Order No. 2003's restriction on applying the independent entity variation only when it would not lead to undue discrimination or preferences.²⁷

16. AWEA contends that transmission owners were on notice that MISO's *pro forma* GIA included the option to build for stand-alone network upgrades and therefore could have included this option to build in arguments to the *Ameren* court or in pleadings in relevant Commission proceedings.²⁸ AWEA states that no transmission owners made these arguments, and so may not belatedly seek to expand the holding of *Ameren* now.²⁹

17. AWEA contends that the independent entity variation the Commission accepted in the December 2019 Order does not accomplish the goals of Order Nos. 845 and 845-A in establishing the expanded option to build, which were to ensure that there is no limitation on the interconnection customer's ability to build stand-alone network upgrades in a cost-effective manner and to avoid paying higher costs for these facilities.³⁰ Instead, AWEA asserts, the approved independent entity variation will increase the cost that the interconnection customer will pay for the stand alone network upgrades.³¹ Specifically, AWEA describes MISO's independent entity variation as permitting the transmission owner to take the interconnection customer's cost for the engineering, procurement, and construction of the stand-alone network upgrades, use that cost as a base, and add in excess of 40% to the cost on a net present value basis to include a return on the base amount.³² According to AWEA, this exponentially increases the cost to the interconnection customer and, as the evidence in this and other dockets before the Commission has shown, will "restrict an interconnection customer's ability to efficiently build the . . . stand-alone network upgrades in a cost-effective manner" and "result in higher costs for interconnection customers' contrary to the Commission's goals in Order No. 845."³³ According to AWEA, in contravention of Order No. 845's goals, this significantly increases the interconnection customer's cost, thereby limiting the

²⁶ 16 U.S.C. § 796 *et seq.* (2018).

²⁷ AWEA Request for Rehearing at 13.

²⁸ *Id.*

²⁹ *Id.* at 14.

³⁰ *Id.* at 10.

³¹ *Id.* at 14.

³² *Id.* at 14-15.

³³ *Id.* at 4 (quoting Order No. 845, 163 FERC ¶ 61,043 at PP 85-86).

interconnection customer's ability to construct stand-alone network upgrades in a cost-effective and efficient manner.³⁴

18. AWEA characterizes as illogical and inconsistent with the evidence in this proceeding the Commission's statement in the December 2019 Order that allowing a transmission owner to pay an invoice (in order to elect transmission owner initial funding) and then charge the customer over the life of stand-alone network upgrades over the next 20 to 30 years results in an interconnection customer paying a return on a lower initial amount.³⁵ AWEA states that the hypothetical comparison provided by MISO, and upon which the Commission relied for this assertion (\$17 million interconnection customer cost versus \$20 million transmission owner cost for engineering, procurement, and construction), does not reflect actual increased costs to the interconnection customer from transmission owner initial funding of stand-alone network upgrades. AWEA states that, where the lowest estimated cost increase is 30% on a net present value basis, then an interconnection customer's costs would be \$22.1 million instead of \$20 million (and likely higher).³⁶

19. Citing a filing in Docket No. ER20-741-000, AWEA represents that a transmission owner electing transmission owner initial funding in a Facilities Service Agreement proposed to collect an engineering, procurement, and construction charge over 18 years that cost \$1,958,613.³⁷ AWEA states that, together with a fixed charge rate and rate of return of 13.9%, the interconnection customer on a net present value basis will pay \$273,422 per year or \$4,921,596, which is a \$2.9 million or 60% increase in costs.³⁸

³⁴ *Id.* at 15.

³⁵ *Id.* at 14.

³⁶ *Id.* at 15.

³⁷ *Id.* (referencing Midcontinent Independent System Operator, Inc., FERC FPA Electric Tariff, Midwest ISO Agreements, SA 3224, Ameren Illinois-Bishop Hill FSA, (31.0.0)).

³⁸ On March 6, 2020, the Commission accepted the Facilities Study Agreement filed in Docket No. ER20-741-000 and directed the transmission owner to refund: (1) the time value of the revenues it collected from the interconnection customer during the period in which the rates were not authorized by the Commission, limited to the extent necessary to ensure that the transmission owner does not operate at a loss; and (2) the difference, with interest, between the proposed monthly charges in that agreement and the monthly charges the interconnection customer paid during the period in which rates were

AWEA states that the Commission's reliance on the sole hypothetical provided by MISO does not justify the higher costs that the interconnection customer will pay, as demonstrated by many more examples that "can be gleaned from the Commission's files that demonstrate the exact same significant cost increase to the interconnection customer."³⁹ Because of these expected higher costs to interconnection customers, AWEA asserts that the Commission's acceptance in the December 2019 Order of MISO's requested independent entity variation from Order No. 845 was arbitrary and capricious.⁴⁰

c. Commission Determination

20. For the reasons discussed below, we deny AWEA's request for rehearing of the December 2019 Order.

21. In Order No. 2003, the Commission permitted Regional Transmission Organizations/Independent System Operators (RTOs/ISOs) to seek "independent entity variations" for pricing and non-pricing provisions and held that RTOs/ISOs "shall have greater flexibility to customize [their] interconnection procedures and agreement to fit regional needs."⁴¹ The Commission stated that this approach recognizes that an RTO/ISO is less likely to act in an unduly discriminatory manner than a transmission provider that is a market participant.⁴² The Commission has granted independent entity variations from rulemakings where an RTO/ISO demonstrates that the proposed variation: (1) is just and reasonable, and not unduly discriminatory or preferential; and (2) accomplishes the purposes of the final rule. It is not a sufficient justification to state that a variation conforms to current RTO/ISO practices or to the RTO's/ISO's tariff definitions and terminology.⁴³ As discussed below, we affirm the Commission's

not authorized by the Commission. See *Midcontinent Indep. Sys. Operator, Inc.*, 170 FERC ¶ 61,182, at P 1 (2020).

³⁹ AWEA Request for Rehearing at 15.

⁴⁰ *Id.* at 15-16.

⁴¹ Order No. 2003, 104 FERC ¶ 61,103 at P 826.

⁴² *Id.* P 827.

⁴³ See, e.g., *ISO New England, Inc.*, 164 FERC ¶ 61,222, at P 9 (2018) (citing Order No. 2003, 104 FERC ¶ 61,103 at PP 26, 827; *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,247, at P 20 (2016); *Cal. Indep. Sys. Operator Corp.*, 140 FERC ¶ 61,070, at P 44 (2012)).

acceptance of MISO's proposed independent entity variation in the December 2019 Order and continue to find that MISO's proposed variation is just and reasonable and not unduly discriminatory or preferential and accomplishes the purposes of Order Nos. 845 and 845-A.⁴⁴

22. Order Nos. 845 and 845-A did not change the Order No. 2003 interconnection crediting policy. Accordingly, MISO was not obligated to revise its interconnection customer crediting policy in its Order No. 845 compliance filing. Pursuant to the *pro forma* LGIP and *pro forma* LGIA adopted in Order No. 2003, an interconnection customer initially funds 100% of the cost of interconnection-related network upgrades, and such costs are reimbursed to the interconnection customer through credits against transmission service charges when the interconnection customer commences commercial operation.⁴⁵ MISO, though, has an existing independent entity variation from the crediting policy established in the *pro forma* LGIP and *pro forma* LGIA in Order No. 2003.⁴⁶ Under MISO's interconnection customer funding policy, an interconnection customer is responsible for 100% of network upgrade costs, with a possible 10% reimbursement for network upgrades that are 345 kV and above.⁴⁷ Because Order No. 845 did not change the *pro forma* interconnection crediting policy in Order No. 2003, it was not at issue in MISO's Order No. 845 compliance filing.

23. As a separate aspect of MISO's interconnection customer crediting policy and as a result of the *Ameren* decision, transmission owners in MISO may unilaterally elect to initially fund network upgrades.⁴⁸ The Commission in Order No. 845 declined to require mutual agreement between the interconnection customer and the transmission owner for the transmission owner to initially fund the cost of any network upgrades, including stand-alone network upgrades.⁴⁹ The Commission stated that the "Order No. 845 option to build revisions, which do not alter the Order No. 2003 crediting policy, do not conflict

⁴⁴ December 2019 Order, 169 FERC ¶ 61,221 at PP 18, 45, 49.

⁴⁵ Order No. 2003, 104 FERC ¶ 61,103 at PP 22, 676, 683, 693; *see also* Order No. 845-A, 163 FERC ¶ 61,043 at P 9.

⁴⁶ *See* Order No. 845-A, 166 FERC ¶ 61,137 at P 10.

⁴⁷ *See Midwest Indep. Transmission Sys. Operator, Inc.*, 129 FERC ¶ 61,060, at P 8 (2009), *order denying reh'g*, 154 FERC ¶ 61,073 (2016).

⁴⁸ *See Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,233, at P 37 (2019) (*Ameren Remand Rehearing Order*).

⁴⁹ Order No. 845, 163 FERC ¶ 61,043 at P 122; Order No. 845-A, 166 FERC ¶ 61,137 at P 20.

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 Additionally, in Order No. 845-B, while the Commission reiterated that “Order No. 845 did not change the fact that the Commission explicitly provided an option pursuant to which transmission providers can earn a return of, and on, the costs of network upgrades through the Order No. 2003 crediting policy,”⁵¹ it also noted that “nothing prevented RTOs/ISOs from addressing whether the relevant provisions in their tariffs implicate *Ameren* and ensuring that they address such concerns when they submitted their filings to comply with Order Nos. 845 and 845-A.”⁵² The Commission also clarified that it “did not prohibit transmission providers, including RTOs/ISOs, from arguing that they qualify for a variation from the *pro forma* LGIP and the *pro forma* LGIA.”⁵³

24. MISO’s interconnection customer crediting policy is not at issue in this proceeding, and AWEA has not alleged that MISO’s interconnection customer crediting policy must change in light of Order Nos. 845 and 845-A. Rather, as MISO has stated, “not harmonizing a Transmission Owner’s right to Self Fund with the expanded Option to Build could impermissibly undermine a Transmission Owner’s Right to Self Fund.”⁵⁴ Therefore, MISO requested an independent entity variation in its compliance filing in this proceeding, which MISO explained is necessary to reconcile Order No. 845’s option to build requirements with MISO’s existing independent entity variation, whereby an interconnection customer is responsible for 100% of network upgrade costs, with a possible 10% reimbursement for network upgrades that are 345 kV and above, and the unilateral right of transmission owners to elect to initially fund network upgrades.

25. We continue to find that MISO’s compliance filing satisfied the Commission’s independent entity variation standard for compliance with Order Nos. 845 and 845-A, by reconciling Order Nos. 845 and 845-A’s option to build requirements with MISO’s interconnection customer crediting policy and the transmission owners’ right to elect transmission owner initial funding for stand-alone network upgrades, in a way that is just and reasonable and not unduly discriminatory or preferential and that accomplishes the purposes of Order Nos. 845 and 845-A. As relevant here, in order to improve certainty for interconnection customers, Order Nos. 845 and 845-A revised sections 5.1, 5.1.3, and

⁵⁰ *Id.*

⁵¹ Order No. 845-B, 166 FERC ¶ 61,092 at P 27.

⁵² *Id.* P 28.

⁵³ *Id.*

⁵⁴ MISO Answer, Docket No. ER19-1960-000, at 6 (July 11, 2019).

5.1.4 of the *pro forma* LGIP and LGIA “to allow interconnection customers to exercise the option to build with respect to the transmission provider’s interconnection facilities and stand-alone network upgrades regardless of whether the transmission provider can meet the interconnection customer’s proposed dates.”⁵⁵ As relevant here, MISO’s compliance filing adopts the language defining stand-alone network upgrades from the *pro forma* LGIP and *pro forma* LGIA in Order Nos. 845 and 845-A with respect to the option to build stand-alone network upgrades. Interconnection customers in MISO may exercise the option to build stand-alone network upgrades required by Order Nos. 845 and 845-A.

26. We disagree with AWEA’s contention that a transmission owner’s unilateral right to elect to initially fund network upgrades in section 5.2(13) of MISO’s GIP and *pro forma* GIA, pursuant to the *Ameren* decision, should not extend to stand alone network upgrades. *Ameren* did not distinguish between network upgrades as a whole and stand-alone network upgrades, and the Commission described the court in *Ameren* “as skeptical of the idea that a transmission owner need not earn a profit on all parts of its business.”⁵⁶ We agree with AWEA that, under the *pro forma* LGIP and *pro forma* LGIA adopted in Order Nos. 845 and 845-A, network upgrades are stand-alone if the network upgrades do not affect a transmission owner’s day-to-day operations during construction.⁵⁷ The *pro forma* LGIP and *pro forma* LGIA adopted in Order Nos. 845 and 845-A, however, before specifying how stand-alone network upgrades are different from other network upgrades, first define stand-alone network upgrades as network upgrades.⁵⁸ These network upgrades, once completed, will ultimately become part of MISO transmission owners’ systems and will be owned, operated, and maintained by the MISO transmission owner. As the Commission indicated in the December 2019 Order, transmission owners are thus entitled to earn a return of and on stand-alone network

⁵⁵ Order No. 845, 163 FERC ¶ 61,043 at P 85. The *pro forma* LGIP and LGIA, as revised in Order No. 845-A, define stand-alone network upgrades as: “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.” Order No. 845-A, 166 FERC ¶ 61,137 at P 68 (emphasis omitted).

⁵⁶ *Ameren Remand Rehearing Order*, 169 FERC ¶ 61,233 at P 39 (citing *Ameren*, 880 F.3d at 581).

⁵⁷ See AWEA Request for Rehearing at 9.

⁵⁸ See Order No. 845-A, 166 FERC ¶ 61,137 at P 68.

upgrades as part of their systems.⁵⁹ Moreover, in Order No. 2003, the Commission defined stand-alone network upgrades as a subcategory of network upgrades in order to limit the category of network upgrades that interconnection customers may choose to construct pursuant to the option to build.⁶⁰ MISO's compliance filing allowing transmission owner initial funding of such network upgrades does not undermine the option to construct stand-alone network upgrades on the interconnection customer's own timeline.⁶¹

27. While *Ameren* did not discuss stand-alone network upgrades specifically, *Ameren* also did not exclude stand-alone network upgrades, or any other type of network upgrades, from the broader category of network upgrades.⁶² It was therefore reasonable for the Commission in the December 2019 Order to find that stand alone network upgrades for the purposes of cost allocation are a subset of all other network upgrades and are subject to transmission owner initial funding.

28. Moreover, MISO's compliance filing maintained, as relevant here, the same option to build provision as Order Nos. 845 and 845-A. While MISO's policy of transmission owner initial funding, pursuant to *Ameren*, may result in higher costs to interconnection customers over the life of any network upgrade, including stand-alone network upgrades, an interconnection customer that chooses the option to build establishes the base construction costs for a stand-alone network upgrade upon which the transmission owner will later earn a return and through that option has the incentive to keep those base costs lower.⁶³

⁵⁹ December 2019 Order, 169 FERC ¶ 61,221 at PP 46-47 (citing *Ameren*, 880 F.3d at 580-82).

⁶⁰ See Order No. 2003, 104 FERC ¶ 61,103 at PP 337, 353 (finding that the *pro forma* LGIA does not grant any right to the interconnection customer to construct network upgrades that are not stand-alone network upgrades).

⁶¹ See December 2019 Order, 169 FERC ¶ 61,221 at P 49.

⁶² *Ameren*, 880 F.3d at 572 (defining network upgrades as “any new construction that occurs within [transmission owners’] transmission grid itself to accommodate the incoming flows of new power.” (emphasis added)).

⁶³ *Cf. id.* at 579 (“[S]ince they bear a greater share of cost responsibility, the generators also have a sharper incentive than Petitioners to reduce the costs of raw materials, or construction labor, or design fees. This is why the generators can challenge inclusion of any such costs that deviate unreasonably from a fair market price before the Commission.”).

29. We also reject AWEA's argument that the Commission should not have granted MISO an independent entity variation for its compliance with Order Nos. 845 and 845-A's option to build requirements, given that transmission owners, not MISO, decide whether to apply transmission owner initial funding to stand alone network upgrades. Under Order Nos. 845 and 845-A, like Order No. 2003, RTOs/ISOs such as MISO may seek an independent entity variation for pricing and non-pricing provisions to customize their interconnection procedures and agreements to fit regional needs.⁶⁴ MISO has long had an independent entity variation from the *pro forma* LGIP and LGIA established in Order No. 2003.⁶⁵ AWEA argues that allowing transmission owners the discretion to elect transmission owner initial funding for stand-alone network upgrades renders MISO's compliance proposal unduly discriminatory or preferential. However, as discussed above, neither MISO's interconnection customer crediting policy, nor transmission owner initial funding for network upgrades, is at issue in this proceeding, and MISO's proposed revisions to comply with Order No. 845 do not alter the transmission owners' right to elect this funding option. The Commission restored transmission owners' right to elect transmission owner initial funding in the Ameren Remand Rehearing Order,⁶⁶ finding that right had not been shown to be unduly discriminatory or preferential, and arguments to the contrary here, which were also presented in the proceeding on remand from *Ameren*, constitute an impermissible collateral attack on that order.

⁶⁴ Order No. 845, 163 FERC ¶ 61,043 at P 43 (citing Order No. 2003, 104 FERC ¶ 61,103 at P 826); *see also* Order No. 2003, 104 FERC ¶ 61,103 at P 827 (“With respect to an RTO or ISO, at the time its compliance filing is made, as discussed above, we will allow it to seek ‘independent entity variations’ from the Final Rule pricing and non-pricing provisions. This is a balanced approach that recognizes that an RTO or ISO has different operating characteristics depending on its size and location and is less likely to act in an unduly discriminatory manner than a Transmission Provider that is a market participant. The RTO or ISO shall therefore have greater flexibility to customize its interconnection procedures and agreements to fit regional needs.”).

⁶⁵ *See, e.g., Midwest Indep. Sys. Transmission Operator, Inc.*, 108 FERC ¶ 61,027 (2004).

⁶⁶ *See Ameren Remand Rehearing Order*, 169 FERC ¶ 61,233 at P 38 (“On the issue of undue discrimination, contrary to AWEA's assertions, we find that the fact that a majority of transmission owners in MISO also own generation is not adequate by itself to demonstrate that there is undue discrimination, nor does it justify requiring all transmission owners in MISO to bear the risks of Generator Up-Front Funding.”) (citing *Ameren*, 880 F.3d at 578; *Midcontinent Indep. Sys. Operator, Inc.*, 164 FERC ¶ 61,158, at P 29 & n.65 (2018)).

2. February Compliance Filing

30. As discussed below, we find that MISO's February Compliance Filing partially complies with the requirements of the December 2019 Order. Accordingly, we accept MISO's February Compliance Filing, effective December 20, 2019, and direct MISO to submit a further compliance filing within 120 days of the date of this order.

a. Interconnection Customer's Option to Build

i. December 2019 Order

31. In the December 2019 Order, the Commission found that MISO's proposed revisions to its GIP and *pro forma* GIA to allow interconnection customers to unilaterally exercise the option to build stand-alone network upgrades and transmission owner's interconnection facilities partially complied with the requirements of Order Nos. 845 and 845-A.⁶⁷ The Commission found that MISO's proposed funding arrangement for stand-alone network upgrades was unjust and unreasonable because it would allow transmission owners to avoid the risks and costs associated with financing and constructing a new construction project while retaining benefits as if the transmission owners incurred those risks and costs.⁶⁸

32. As discussed above, in its Order No. 845 compliance filing, MISO requested an independent entity variation to reconcile the interconnection customer's unilateral ability to exercise the option to build stand-alone network upgrades with the MISO transmission owner's right to unilaterally elect to provide initial funding for network upgrades, then recover the interconnection customer's portion of these costs over time through network upgrade charges that included a return of capital and a return on capital investment.⁶⁹ MISO proposed a condition in article 5.2(13) of its *pro forma* GIA whereby, if an interconnection customer exercised the option to build stand-alone network upgrades, and the transmission owner elected to provide initial funding for those upgrades, the interconnection customer would invoice the transmission owner for the construction of the stand-alone network upgrades, and the transmission owner would reimburse the interconnection customer the full invoiced amount prior to the date specified in Appendix B (Interconnection Customer Milestone 9) of MISO's *pro forma* GIA when the

⁶⁷ December 2019 Order, 169 FERC ¶ 61,221 at P 44.

⁶⁸ *Id.* P 53.

⁶⁹ *Id.* P 23 (citing MISO Order No. 845 Compliance Filing, Docket No. ER19-1960-000, Transmittal Letter at 10 (filed May 22, 2019)).

interconnection customer transferred the stand alone network upgrades to the transmission owner.⁷⁰

33. The Commission found that MISO's proposal was unclear as to when the transmission owner would reimburse an interconnection customer for the costs of any stand-alone network upgrades the interconnection customer constructed after exercising the option to build.⁷¹ The Commission was concerned that, if transmission owner reimbursement for the cost of these facilities occurred after the stand alone network upgrades were completed, there would be a misalignment of the risks with the rate of return that the transmission owner would receive. The Commission explained that MISO's proposed funding arrangement could require the interconnection customer exercising the option to build to take on the risk of financing and constructing the stand alone network upgrades, while allowing the transmission owner to earn the same rate of return the transmission owner would have earned if it had constructed and provided initial funding for the stand alone network upgrades. Thus, the Commission found that MISO's proposal could allow transmission owners to avoid the risks of providing initial financing for, and constructing, stand-alone network upgrades while retaining benefits as if they incurred some of those risks and costs.

34. Therefore, the Commission directed MISO to submit Tariff revisions providing that the transmission owner will pay the interconnection customer's invoice for the estimated stand-alone network upgrade construction costs before the date the interconnection customer must make any construction payment, and true-up any over- or underpayment after construction is completed and actual construction costs are known.⁷² The Commission reasoned that it was reasonable to shift the risk for initial financing to the transmission owner because the transmission owner would then be able to collect a return of and on capital.

35. Finally, the Commission required MISO to remove the proposed reference to "transmission owner's interconnection facilities" in Interconnection Customer Milestone 9 of the *pro forma* GIA, which would have required the interconnection customer to invoice the transmission owner for the amount it expended to construct any stand-alone network upgrades *and* transmission owner's interconnection facilities for which the interconnection customer exercised its option to build if the transmission owner elected to provide initial funding.⁷³ The Commission found that MISO provided

⁷⁰ *Id.* P 27.

⁷¹ *Id.* P 51.

⁷² *Id.* P 53.

⁷³ *Id.* P 54.

no justification for requiring the interconnection customer to invoice the transmission owner for the costs of transmission owner's interconnection facilities, because interconnection customers in MISO pay directly for the costs associated with all interconnection facilities.

ii. February Compliance Filing

36. MISO proposes to revise article 5.2(13) and Appendix B of its *pro forma* GIA to establish a mechanism for initial payment and true-up after construction of stand-alone network upgrades for which the interconnection customer has exercised its option to build.⁷⁴ First, MISO proposes to revise article 5.2(13) of its GIA to provide that: (1) the interconnection customer shall invoice the transmission owner for the estimated amount to be expended by the interconnection customer to construct stand-alone network upgrades for which the interconnection customer has exercised its option to build prior to incurring those construction costs and by a date to be specified in Appendix B; (2) the transmission owner shall reimburse the interconnection customer for the full amount of invoiced construction costs by a date specified in Appendix B, which shall be prior to the date that the interconnection customer must make any construction payment for the stand alone network upgrades that the interconnection customer will build; (3) if the actual costs exceed the previously-invoiced estimated construction costs, the transmission owner shall pay to the interconnection customer the difference between the amount previously paid and the actual costs within 30 days after receiving the interconnection customer's final construction invoice; and (4) if the actual costs are less than the previously-invoiced estimated costs, the interconnection customer shall refund the difference, with interest calculated in accordance with 18 C.F.R. § 35.19a(a)(2)(iii) (2019), to the transmission owner within 30 days of the issuance of the final construction invoice.⁷⁵

37. Second, to implement this sequence of invoices and payments when the interconnection customer has exercised its option to build and the transmission owner has elected to provide initial funding, MISO proposes new Interconnection Customer Milestone 5 for inclusion in Appendix B of its *pro forma* GIA.⁷⁶ Interconnection Customer Milestone 5 requires the interconnection customer to provide an invoice for its estimated costs to construct stand-alone network upgrades to the transmission owner at any agreed time that cannot be less than 45 days before the date that the interconnection

⁷⁴ February Compliance Filing, Transmittal Letter at 5.

⁷⁵ *Id.* at 5-6, *proposed* MISO Tariff, Attach X, app. 6, § 5.2(13) (78.0.0).

⁷⁶ *Id.*, Transmittal Letter at 6, *proposed* MISO Tariff, Attach X, app. 6, app'x B, Interconnection Customer Milestone 5 (78.0.0).

customer must make any construction payment. MISO also proposes a corresponding Transmission Owner Milestone 6 requiring the transmission owner to pay for such estimated costs within 30 days after receiving the invoice. MISO asserts that the 30-day payment timeline is consistent with the timeframe for paying invoices specified under article 12.3 of the GIA. MISO notes that, while there may be several days of lag between the date that the interconnection customer submits the invoice and the date that the transmission owner receives it, the requirement to invoice the transmission owner no later than 45 days prior to incurring construction costs allows for payment to be received prior to incurring such costs.

38. Third, MISO proposes to include Interconnection Customer Milestones 10 and 10b in Appendix B of its *pro forma* GIA. These milestones obligate the interconnection customer to invoice the transmission owner for final costs within six months after completing the construction of the facilities, and refunding any overpayments if the estimated amount was higher than the actual amount within 30 days after submitting that invoice.⁷⁷ MISO states that the six-month deadline is consistent with the deadline that applies to the transmission owner when the transmission owner is invoicing for final costs under article 12.2 of the GIA and Transmission Owner Milestone 7.17. MISO proposes to calculate the 30 days to reimburse overpayments from the date that the interconnection customer sends its final invoice. MISO states that the requirement to pay interest on any amount by which estimated costs exceed the actual costs mirrors the requirement that the transmission owner must pay interest when its estimated construction costs exceed actual costs under article 12.2 of the GIA. MISO argues that including a parallel requirement here thus provides for similar treatment of transmission owner and interconnection customer construction cost estimates. MISO also proposes Transmission Owner Milestone 6a, which requires the transmission owner to provide payment of any amount by which actual costs in the final invoice exceed the estimated costs within 30 days of receipt. MISO states that this provision is consistent with article 12.3 of the GIA.

39. Finally, MISO proposes to remove the reference to transmission owner's interconnection facilities from Interconnection Customer Milestone 10.⁷⁸

⁷⁷ *Id.*, Transmittal Letter at 6, *proposed* MISO Tariff, Attach X, app. 6, app B, Interconnection Customer Milestone 10 (78.0.0).

⁷⁸ *Id.*, Transmittal Letter at 6. MISO states that this is the Interconnection Customer Milestone 9 noted by the Commission in the December 2019 Order, which has been renumbered to accommodate new Interconnection Customer Milestone 5. *Id.* at 5 n.13.

iii. Commission Determination

40. We find that MISO's proposed revisions to article 5.2(13) and Appendix B in its *pro forma* GIA comply with the Commission's directives in the December 2019 Order. We find that MISO's proposed funding arrangement and true-up mechanism appropriately shift the risks of initial financing for stand-alone network upgrades to the transmission owner, as required by the December 2019 Order. We find MISO's proposed timelines for invoices and payments to be just and reasonable, as they provide adequate time for the parties to meet their stated obligations and mirror similar timelines in articles 12.2 and 12.3 of MISO's *pro forma* GIA. Finally, MISO has appropriately removed the requirement for the interconnection customer to invoice the transmission owner for the costs of transmission owner's interconnection facilities.

b. Identification and Definition of Contingent Facilities

i. December 2019 Order

41. In the December 2019 Order, the Commission found that MISO's proposed revisions identifying and describing MISO's methods for determining contingent facilities partially complied with the requirements of Order Nos. 845 and 845-A.⁷⁹ First, the Commission found that the specific criteria that MISO proposed to use to identify contingent facilities would determine the potential cost exposure for the interconnection customer and would therefore significantly affect the rates, terms, and conditions of service.⁸⁰ Accordingly, the Commission directed MISO to make a further compliance filing to include Tariff language describing the impact criteria MISO uses in its distribution factor analysis to determine which MTEP projects constitute contingent facilities.

42. Second, the Commission found that MISO's proposal to review network upgrades identified through the system impact studies of higher-queued projects lacked the requisite transparency required by Orders Nos. 845 and 845-A because the proposed Tariff revisions did not detail the specific technical screens or analyses and the specific thresholds or criteria that MISO would use to review higher-queued projects as part of its method to identify contingent facilities.⁸¹ Therefore, the Commission required MISO to submit a further compliance filing to include the specific thresholds or criteria MISO uses

⁷⁹ December 2019 Order, 169 FERC ¶ 61,221 at P 66.

⁸⁰ *Id.* P 67.

⁸¹ *Id.* P 68.

to determine which network upgrades from higher-queued projects constitute contingent facilities.

43. Finally, the Commission found that MISO's proposal did not comply with Order Nos. 845 and 845-A's requirement that transmission providers present the contingent facilities list at the conclusion of the system impact study, because the proposed Tariff language stated only that the GIA would include the contingent facilities list.⁸² The Commission found that providing interconnection customers with a list of contingent facilities at the start of Decision Point II in MISO's Definitive Planning Phase would allow interconnection customers to use the contingent facilities information to better understand their risk exposure and expedite decisions on queue withdrawal.⁸³ The Commission therefore required that MISO submit a further compliance filing to either: (a) provide an interconnection customer with an initial list of contingent facilities at the start of Decision Point II, in addition to the final list of contingent facilities provided in Appendix A of MISO's GIA; or (b) explain how providing a list of contingent facilities at a different point in the interconnection process would accomplish the purposes of Order No. 845.

ii. February Compliance Filing

44. MISO proposes to revise section 3.8 of its GIP to state:

MISO identifies Contingent Facilities using the following three methods:

- i. Review all transmission facilities that are: (1) listed in Appendix A of the Transmission Provider's Transmission Expansion Plan (MTEP) that are not yet in service; or (2) identified as Network Upgrades through the System Impact Studies for higher queued Interconnection Requests that are not yet in service. Contingent Facilities shall be identified from this list as those facilities that meet the following criteria:
 - a. Power Transfer Distribution Factor or Outage Transfer Distribution Factor $\geq 5\%$ and;

⁸² *Id.* P 69.

⁸³ *Id.* P 70. MISO's three-phase Definitive Planning Phase has decision points before Phase II and Phase III (Decisions Points I and II, respectively), wherein an interconnection customer can review study results and decide to either proceed to the next phase or withdraw its interconnection request.

- b. MW impact (Power Transfer Distribution Factor or Outage Transfer Distribution Factor multiplied by generator output of the Interconnection Request) \geq 5 MW, and;
 - c. MW impact (Power Transfer Distribution Factor or Outage Transfer Distribution Factor multiplied by generator output of the Interconnection Request) \geq 1% of the Facility Rating.
- ii. All Network Upgrades identified in the Final System Impact Study for a given Interconnection Request pursuant to Section 7.3.3.3 of this GIP.
 - iii. Coordination with applicable Affected System parties to determine what Contingent Facilities have been identified through Affected System Studies based on their respective criteria.⁸⁴

45. MISO asserts that the contingent facilities identified for a given interconnection request are the total of all facilities identified through each of the foregoing three methods.⁸⁵ MISO argues that these proposed revisions satisfy the Commission's directives in the December 2019 Order to describe: (1) the impact criteria that MISO uses in its distribution factor analysis to determine which MTEP projects constitute contingent facilities; and (2) the specific thresholds or criteria that MISO uses to determine which network upgrades from higher-queued projects constitute contingent facilities.⁸⁶ MISO explains that, when it studies a proposed project, MISO includes in the models used to evaluate interconnection requests those facilities that were specified in previously approved MTEPs, targeted for approval in the current MTEP cycle, or in higher-queued projects. MISO states that this allows the models to reflect the expected state of the transmission system when a proposed generating facility achieves commercial operation. MISO asserts that, to the extent that those facilities remain unbuilt, or contingent, delays or failures to bring them into service could impact the costs or timing of interconnection requests that were studied with the assumption that those contingent facilities would be in service.

46. MISO further states that, for each interconnection request, its proposed Tariff language provides that MISO will review all unbuilt network upgrades identified in the

⁸⁴ February Compliance Filing, Transmittal Letter at 7, *proposed* MISO Tariff, Attach X, § 3.8 (Identification of Contingent Facilities) (125.0.0).

⁸⁵ *Id.*, Transmittal Letter at 7.

⁸⁶ *Id.* at 8.

system impact studies of higher-queued interconnection requests and facilities identified in the MTEP.⁸⁷ MISO states that it will then apply the analyses, criteria, and thresholds specified in proposed sections 3.8(i)(a)(c) of its GIP to determine if such facilities should be identified as contingent facilities for a given interconnection request. MISO states that it applies the same criteria and thresholds for facilities identified in the MTEP, and network upgrades identified in the system impact studies of higher-queued interconnection requests, to determine if they are contingent facilities for a given interconnection request. MISO states that those facilities that meet the thresholds under all three proposed criteria will be listed as contingent facilities for a generating facility.

47. MISO notes that its proposed revisions to section 3.8 of its GIP use two terms not otherwise defined in MISO's GIP, but which are defined by the North American Electric Reliability Corporation (NERC) in its glossary of terms: "Outage Transfer Distribution Factor" and "Power Transfer Distribution Factor."⁸⁸ MISO explains that, to avoid confusion, MISO proposes to include a definition for each of these terms in its GIP identifying these as NERC-defined terms. MISO submits that including this level of information in its GIP provides significant process transparency and fully complies with the directives of the December 2019 Order.

48. To further clarify the facilities subject to its contingent facilities study, MISO states that it has included as subparagraph 3.8(ii) of its proposed Tariff revisions those facilities identified in the system impact study for a given interconnection request.⁸⁹ MISO states that, while it is axiomatic that the service granted in a GIA is subject to building the network upgrades identified in the studies for that generating facility, MISO states that it nonetheless includes this category of upgrades for clarity.⁹⁰

49. With respect to the Commission's directives on the timing of when a list of contingent facilities will be provided to an interconnection customer, MISO proposes to revise its Tariff to require MISO to provide an initial list of contingent facilities to interconnection customers at the start of Decision Point II, and a final list in Appendix A of MISO's GIA.⁹¹ To clarify how the initial list will differ from the final list provided in the GIA, MISO proposes to revise section 3.8(ii) of its GIP to specify that the contingent facilities for a given project will be those identified in the final system impact study

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.* at 8-9.

⁹¹ *Id.* at 9.

performed in the Definitive Planning Phase of MISO's interconnection process pursuant to section 7.3.3.3 of its GIP, whereas the initial list will contain all facilities that have been identified as of the revised system impact study performed pursuant to section 7.3.2.3 of its GIP. MISO states that providing this information, as well as the citations to the applicable Tariff sections governing the two studies, will enable interconnection customers to understand the differences between the initial and final list and how results may change. Further, MISO states that the estimated interconnection facility and/or network upgrade costs and estimated in-service completion time of each identified contingent facility shall be provided in Appendix A of the GIA when this information is readily available and not commercially sensitive.⁹²

iii. Protest

50. Leeward argues that MISO's proposed approach for identifying contingent facilities is not consistent with Order No. 845 because it lacks specificity and will lead to the identification of a broader set of facilities designated as contingent that do not meet the definition of contingent facilities set forth in Order No. 845.⁹³ Leeward contends that the Commission did not intend to include, in the definition of contingent facilities, facilities that are minimally impacted by the interconnection request after applying the methods for identifying contingent facilities. Leeward argues that MISO's proposal conflicts with this intent because it proposes that a project needs to merely put loading above a set of threshold amounts on a new upgrade for that upgrade to be considered a contingent facility. Leeward asserts that a more reasonable method to deal with this perceived overload on the facilities that would be consistent with Order No. 845 is to have the project add flow in the adverse direction on the limiting elements that the network upgrade is intended to fix, not the upgrade itself.⁹⁴ Leeward asserts that MISO's proposed methods of reviewing the network upgrades and the affected system upgrades establishes criteria that are too broad to identify contingent facilities.

51. Leeward further argues that, simply because a project adds flow to the limiting elements, does not mean that the associated upgrade is automatically qualified as a contingent facility.⁹⁵ Leeward states that such a facility must be overloaded when adverse flow is added and must not be a pre-existing overload for which MISO has not identified a necessary upgrade. Leeward notes that some generation projects can improve

⁹² *Id.* at 7.

⁹³ Leeward Protest at 4.

⁹⁴ *Id.* at 5.

⁹⁵ *Id.*

system reliability, but it argues that MISO's process for identifying contingent facilities excludes this factor from its consideration when compiling its list of contingent facilities. As a result, Leeward contends, MISO's approach unreasonably casts a wider net, which Leeward asserts will lead to a broader list of contingent facilities that do not meet the definition of contingent facility set forth in Order No. 845 and that do not enhance or protect the reliability of MISO's system.

iv. **MISO Answer**

52. MISO states that Leeward's objection is not to the specific impact thresholds included in the Tariff but to the practice of using impact thresholds to determine contingent facilities (unless the interconnection customer's generating facility causes the network upgrade to overload).⁹⁶ MISO contends that the protest misreads the requirements of Order No. 845. MISO asserts that the definition of "contingent facilities" given in Order No. 845 does not require MISO to identify with certainty which facilities the generating facility would cause to overload absent network upgrades under development; rather, MISO contends, Order No. 845 requires transmission providers to identify those facilities on which the interconnection customer's study findings are dependent.⁹⁷ MISO states that the test built into this definition is whether a delay or failure to build the facility identified as contingent could cause a need for restudies or reevaluation, and MISO argues that its proposed methods for identifying contingent facilities are consistent with this definition.

53. MISO explains that the study models used for an interconnection request assume that the facilities approved in the MTEP will be constructed in accordance with their approved in-service dates, which MISO states allows it to conduct interconnection studies using the latest available system information without needing to individually model each interconnection request with and without each facility approved in the MTEP.⁹⁸ MISO further explains that it does not broadly include large numbers of MTEP projects as a contingent facility; instead, MISO states that it performs a distribution factor analysis to determine which facilities a given generating facility causes impacts to, and it eliminates *de minimus* impacts by requiring that the impact meet each of the three separate criteria proposed in its February Compliance Filing. MISO states that any facility that does not meet all three of these thresholds will not be identified as a contingent facility.⁹⁹ MISO

⁹⁶ MISO Answer at 5.

⁹⁷ *Id.* at 6.

⁹⁸ *Id.*

⁹⁹ *Id.* at 7.

asserts that this method screens out those unbuilt MTEP facilities that a given interconnection request either does not impact or only minimally impacts, and it leaves in those facilities that are necessary for the continued validity of the study case and assumptions used to study the interconnection request. In other words, MISO states, its method identifies those facilities “upon which the interconnection request’s costs, timing, and study findings are dependent[,]” as required by Order No. 845.¹⁰⁰

54. MISO asserts that Leeward’s proposed alternative approach would be impractical to apply.¹⁰¹ MISO states that, because it builds its interconnection base case using the results of the previous MTEP, analyzing the impact of added flow to transmission lines without each contingent facility would require it to unwind the MTEP model and analyze how each facility interacts with each interconnection request using thermal, short circuit, and stability analyses before the execution of a GIA.¹⁰² MISO contends that this analysis would add months to the study timeline and still risk missing potential impacts given the potential for changes to projected system conditions after the facility has been identified as a contingent facility. MISO asserts that it is reasonable to identify those facilities that may impact the cost, timing, and study results for an interconnection request up front. MISO notes that the listing of contingent facilities in the GIA simply puts the interconnection customer on notice that those are the facilities expected to impact the cost or timing of the interconnection request, but that MISO will conduct further studies after the GIA is executed to determine whether any limitations should be placed on commercial operation due to unbuilt facilities.¹⁰³ MISO explains that this is the appropriate point to conduct a detailed study of the impacts of an unbuilt contingent facility because it is at this point that current system conditions can be assessed.

55. MISO contends that its proposal satisfies Order No. 845 by describing how the limited set of contingent facilities listed in a GIA will be identified.¹⁰⁴ MISO further asserts that its proposal balances the need for efficiently managing a large queue with providing up-front transparency in the identification of contingent facilities and flexibility to respond to changing conditions.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.* at 8.

¹⁰³ *Id.* at 8-9.

¹⁰⁴ *Id.* at 9.

v. **Commission Determination**

56. We find that MISO's proposed revisions to section 3.8 of its GIP, detailing the impact criteria MISO uses in its distribution factor analysis to determine which MTEP projects constitute contingent facilities and the specific technical screens and analyses and the specific thresholds or criteria that MISO will use to review higher-queued projects as part of its method to identify contingent facilities, comply with the Commission's directives in the December 2019 Order. We further find that MISO's proposed revisions provide a method for identifying contingent facilities that is sufficiently transparent to ensure that it will be applied on a consistent, not unduly discriminatory or preferential basis, in compliance with the Commission's directives in Order No. 845, and that the proposed revisions will enable an interconnection customer to understand how MISO will evaluate potential contingent facilities to determine their relationship to an individual interconnection request.

57. Further, we find that MISO's proposed timing for the provision of a list of contingent facilities to an interconnection customer appropriately occurs at the start of Decision Point II, with an additional final list of contingent facilities provided in Appendix A of an interconnection customer's GIA. This complies with the Commission's directive in the December 2019 Order that interconnection customers must have access to contingent facility information early enough in the interconnection process to better understand their potential risk exposure and to expedite decisions on queue withdrawal.

58. We disagree with Leeward's arguments that MISO has established criteria that are too broad to identify contingent facilities and that MISO's definition includes facilities that are minimally impacted by an interconnection request. We agree with MISO that the definition of contingent facilities established by Order No. 845 requires MISO to identify only those facilities on which an interconnection customer's study findings are dependent, and if delayed or not built, *could* cause a need for restudies or reevaluation.¹⁰⁵ We find that MISO's proposed method for identifying these potential contingent facilities is sufficiently transparent to ensure that it will be applied on a consistent, not unduly discriminatory or preferential basis, consistent with the requirements of Order No. 845. Specifically, we agree with MISO that the proposed distribution factor analysis will determine which unbuilt MTEP facilities are impacted by a given generating facility and will eliminate *de minimis* impacts by requiring that, when identifying a contingent facility

¹⁰⁵ 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. *Pro forma* LGIP, § 1 (Definitions).

from a review of MTEP facilities and network upgrades that are identified through the system impact studies for higher queued interconnection requests not yet in service under GIP section 3.8(i), the impact meet each of the three separate criteria proposed in GIP section 3.8(i). We find that MISO's approach appropriately retains, in the list of contingent facilities, those facilities that MISO cannot eliminate, and therefore, are necessary for the continued validity of the study case and assumptions used to study the interconnection request.

59. We also reject Leeward's request to adopt its proposed method for identifying contingent facilities, which would consider projects that add flow in the adverse direction on the limiting elements that the network upgrade is intended to fix, not the upgrade itself. Leeward's preference for an alternative method does not render MISO's proposed method inconsistent with Order No. 845. Order No. 845 did not require transmission providers to adopt a specific method for identifying the contingent facilities that they will provide to the interconnection customer; rather, the requirement was to specify a method that is sufficiently transparent to determine why a specific contingent facility was identified and how it relates to the interconnection request.¹⁰⁶ As discussed herein, we find that MISO describes with sufficient transparency its proposed methods to identify facilities upon which an interconnection request's costs, timing, and study findings are dependent, as required by Order No. 845.

c. Requesting Interconnection Service Below Generating Facility Capacity

i. December 2019 Order

60. In the December 2019 Order, the Commission found that MISO's proposed Tariff revisions allowing an interconnection customer to request interconnection service below its full generating facility capacity partially complied with the requirements of Order Nos. 845 and 845-A.¹⁰⁷ In particular, the Commission found that MISO's proposed revisions to section 3.1 of its GIP did not fully incorporate the *pro forma* LGIP language adopted by Order No. 845, and the Commission required MISO to file further Tariff revisions to include reference to "associated costs" in the second sentence of the final paragraph of section 3.1 of MISO's GIP.

61. In addition, the Commission found that MISO's proposed Tariff language describing the permissible reductions of requested levels of interconnection service at Decision Points I and II of MISO's Definitive Planning Phase was unclear and could

¹⁰⁶ Order No. 845, 163 FERC ¶ 61,043 at P 199.

¹⁰⁷ December 2019 Order, 169 FERC ¶ 61,221 at P 105.

cause confusion among interconnection customers.¹⁰⁸ Specifically, the Commission found that MISO's proposed Tariff language providing that, for a permissible reduction, the "total amount of [Network Resource Interconnection Service]¹⁰⁹ requested shall not exceed the amount of [Energy Resource Interconnection Service]¹¹⁰ requested" did not clearly reflect the relationship between requests for NRIS and ERIS that MISO described in its compliance filing.¹¹¹ The Commission noted MISO's explanation that "all NRIS includes an equal amount of ERIS" and that, as such, "ERIS service would remain even if the NRIS service is reduced to zero."¹¹² However, the Commission found that neither MISO's existing or proposed Tariff language provided that NRIS would effectively convert to ERIS when the requested level of NRIS is reduced. The Commission therefore found that MISO's proposed Tariff language was unclear without further revisions describing the relationship between ERIS and NRIS and clarifying that, when an interconnection customer requests NRIS service, it is also requesting an equivalent amount of ERIS service. Accordingly, the Commission directed MISO to submit Tariff revisions either clarifying the relationship between ERIS and NRIS or removing the statement that the "total amount of NRIS requested shall not exceed the amount of ERIS requested" from the proposed revisions to sections 7.3.1.4 and 7.3.2.4 in its GIP.

¹⁰⁸ *Id.* P 107.

¹⁰⁹ Network Resource Interconnection Service (NRIS) is "an Interconnection Service that allows Interconnection Customer to integrate its Generating Facility with the Transmission System in the same manner as for any Generating Facility being designated as a Network Resource. Network Resource Interconnection Service does not convey transmission service. Network Resource Interconnection Service shall include any network resource interconnection service established under an agreement with, or the tariff of, a Transmission Owner prior to integration into MISO that is determined to be deliverable through the integration deliverability study process." MISO Tariff, Module A, Definitions, § 1.S (111.0.0).

¹¹⁰ Energy Resource Interconnection Service (ERIS) is an "interconnection of a Generation Resource to the Transmission System or distribution system, as applicable, to be eligible to deliver the Generation Resource's electric output using the existing firm or non-firm capacity of the Transmission System on an as available basis." MISO Tariff, Module A, Definitions, § 1.S (111.0.0).

¹¹¹ December 2019 Order, 169 FERC ¶ 61,221 at P 107.

¹¹² *Id.* (citing May 22 Filing, *proposed* MISO Tariff, Attach X, §§ 7.3.1.4 (Interconnection Customer Decision Point I) and 7.3.2.4 (Interconnection Customer Decision Point II) (112.0.0)).

ii. February Compliance Filing

62. MISO proposes to insert the missing words “and associated costs” in the second sentence of the last paragraph in section 3.1 of its GIP.¹¹³

63. MISO also proposes to clarify the relationship between ERIS and NRIS by revising sections 3.2.2.1, 7.3.1.4, and 7.3.2.4 of its GIP.¹¹⁴ First, MISO proposes to add language to section 3.2.2.1 of its GIP stating that a generating facility requesting NRIS shall be deemed to request ERIS of an equivalent amount, to the extent that the generating facility does not already have ERIS, to allow an interconnection customer to connect the generating facility to the transmission system or distribution system, as applicable, and be eligible to deliver the generating facility’s output.¹¹⁵ MISO states that this proposed language clarifies the relationship between ERIS and NRIS by making explicit the fact that a request for ERIS is included in every request for NRIS, to the extent the generating facility does not already have the requisite ERIS.

64. Second, MISO proposes revisions to sections 7.3.1.4 and 7.3.2.4 of its GIP to state that, because NRIS includes an equivalent amount of ERIS, a reduction in NRIS level will not reduce the ERIS level unless a corresponding reduction in ERIS level is requested and that the total amount of NRIS requested shall not exceed the amount of ERIS requested.¹¹⁶ MISO asserts that its proposed Tariff language clearly explains the nature of the relationship between ERIS and NRIS and fully satisfies the Commission’s directives in the December 2019 Order.

iii. Commission Determination

65. We find that MISO has complied with the Commission’s directive to insert the missing words “and associated costs” in the second sentence of the last paragraph in section 3.1 of its GIP.

¹¹³ February Compliance Filing, Transmittal Letter at 10, *proposed* MISO Tariff, Attach X, § 3.1 (Interconnection Requests – General) (125.0.0).

¹¹⁴ *Id.*, Transmittal Letter at 12.

¹¹⁵ *Id.* at 12, *proposed* MISO Tariff, Attach X, § 3.2.2.1 (Network Resource Interconnection Service – The Product) (125.0.0.0).

¹¹⁶ *Id.*, Transmittal Letter at 12, *proposed* MISO Tariff, Attach X, § 7.3.1.4 (Interconnection Customer Decision Point I) and 7.3.2.4 (Interconnection Customer Decision Point II) (125.0.0).

66. Further, we find that MISO's proposed revisions to sections 3.2.2.1, 7.3.1.4, and 7.3.2.4 of its GIP provide sufficient clarity to the interconnection customer requesting interconnection service below its full generating facility capacity. Therefore, we find that MISO's proposed revisions comply with the Order No. 845 requirement to allow an interconnection customer to request interconnection service below its full generating facility capacity.

d. Surplus Interconnection Service

i. December 2019 Order

67. In the December 2019 Order, the Commission found that MISO's proposed Tariff revisions regarding surplus interconnection service referenced a "Surplus Interconnection Service agreement" that is not defined in the Tariff.¹¹⁷ The Commission directed MISO to revise its Tariff to either replace "Surplus Interconnection Service agreement" with "Energy Displacement Agreement and Monitoring and Consent Agreement" or clarify the nature of this agreement. The Commission also noted that the similar terms "Surplus Interconnection Service Agreement" and "Surplus Interconnection Service Interconnection Agreement" in the Monitoring and Consent Agreement were not defined in the Tariff.¹¹⁸

ii. February Compliance Filing

68. MISO proposes to revise the reference to the "Surplus Interconnection Service agreement" in section 3.3.1.3.1(ii) of its GIP to instead refer to the "Surplus Interconnection Facility's Generator Interconnection Agreement."¹¹⁹ MISO notes that it had intended, in its original Order No. 845 compliance filing, that the consent for continued operation would be reflected in the GIA of the entity holding surplus interconnection service because the consent of the interconnection customer that owns the existing generating facility would be a condition to the ultimate term of the surplus

¹¹⁷ December 2019 Order, 169 FERC ¶ 61,221 at P 129.

¹¹⁸ *Id.* n. 275.

¹¹⁹ February Compliance Filing, Transmittal Letter at 13, *proposed* MISO Tariff, Attach. X, § 3.3.1.3 (Requirements for Continuation of Surplus Interconnection Service after Retirement or Cessation of Commercial Operation of an Existing Generating Facility) (125.0.0).

interconnection facility's GIA. MISO further notes that this would be reflected in the Energy Displacement and Monitoring and Consent Agreement.¹²⁰

iii. Commission Determination

69. We find that MISO's proposed revisions to section 3.3.1.3.1(ii) of its GIP to refer to the "Surplus Interconnection Facility's Generator Interconnection Agreement" comply with the Commission's directives in the December 2019 Order. However, MISO's proposed revisions do not address the terms "Surplus Interconnection Service Agreement" and "Surplus Interconnection Service Interconnection Agreement" in the Monitoring and Consent Agreement; therefore, we find that the proposed revisions create a lack of clarity that may cause confusion to interconnection customers.¹²¹ We direct MISO to submit a further compliance filing within 120 days of the date of this order to either: (1) revise its Tariff to replace the terms "Surplus Interconnection Service Agreement" and "Surplus Interconnection Service Interconnection Agreement" in the Monitoring and Consent Agreement with "Surplus Interconnection Facility's Generator Interconnection Agreement;" or (2) provide a further explanation if such a replacement does not accurately reflect the nature of those agreements.

e. Material Modifications and Incorporation of Advanced Technologies

i. December 2019 Order

70. In the December 2019 Order, the Commission found that MISO's proposal to incorporate a definition of permissible technological advancement and associated procedures in its GIP partially complied with the requirements of Order Nos. 845 and 845-A.¹²² Specifically, the Commission found that MISO's proposed definition of permissible technological advancement met the Commission's requirement to provide a category of technological change that did not constitute a material modification. The Commission also found that MISO's proposed revisions to section 4.4.1 of its GIP to add a new subsection (c) that added permissible technological advancement to the list of permitted modifications complied with Order No. 845 because it incorporated the Commission's *pro forma* language. Additionally, the Commission found that MISO's proposal to accept technological advancement requests up until the issuance of a draft

¹²⁰ *Id.*, Transmittal Letter at n. 50.

¹²¹ *See id.*, proposed MISO Tariff, Attach X, app. 11 (Monitoring and Consent Agreement) (49.0.0).

¹²² December 2019 Order, 169 FERC ¶ 61,221 at P 140.

GIA, rather than the execution of the facilities study agreement, was a permissible independent entity variation.

71. However, the Commission rejected MISO's requested independent entity variation related to the timing of completing additional studies and found that its proposed technological advancement procedure was not compliant with the requirements of Order Nos. 845 and 845-A. Specifically, the Commission found that, while MISO has a large number of projects in its queue and a wide variation in studies that may be needed, MISO had not justified a proposed 60-day timeline for performing additional studies on proposed permissible technological advancements.¹²³ The Commission directed MISO on compliance to either justify its proposed 60-day timeline for completing additional studies or adopt a 30-day timeline.

72. In addition, the Commission found that MISO's proposed Tariff revisions did not specify how MISO would evaluate the technological advancement request to determine if it was a material modification.¹²⁴ The Commission directed MISO to file further Tariff revisions to provide a more detailed explanation of the studies that MISO would conduct to determine whether a technological advancement request would be a material modification.

ii. February Compliance Filing

73. MISO proposes to revise sections 4.4.1 and 4.4.1.1 of its GIP to establish what it says is a technological change procedure distinct from other types of material modification analyses and to provide a more detailed description of the studies used in determining whether the proposed change is a material modification.¹²⁵ MISO states that its proposed revisions to GIP section 4.4.1 under subsection (a) clarify that a permissible technological advancement under subsection (c) is distinct from the "change in the technical parameters" language contained under existing subsection (a) because, even if permissible technological advancements may broadly be thought of as changes in technical parameters, not all changes in technical parameters will be permissible technological advancements that qualify for consideration under the process established in section 4.4.1.1.¹²⁶ MISO states that, for the same reason, it proposes to restore the

¹²³ *Id.* P 141.

¹²⁴ *Id.* P 142.

¹²⁵ February Compliance Filing, Transmittal Letter at 15.

¹²⁶ *Id.*, proposed MISO Tariff, Attach X, § 4.4.1 (Modifications) (125.0.0).

following language to its GIP that it had originally proposed to delete from section 4.4.1 in its May 22, 2019 compliance filing, with slight revisions:

For such permitted modification proposed by Interconnection Customer or [Merchant High Voltage Direct Current] Connection Customer *pursuant to 4.4.1(a) or 4.4.1(b)*, Interconnection Customer or [Merchant High Voltage Direct Current] Connection Customer shall submit a detailed analysis demonstrating why they believe the change is not a Material Modification. Transmission Provider must review such analysis and will determine, in its discretion, if the proposed modification is a Material Modification. In the absence of such analysis, the modification shall be deemed a Material Modification.¹²⁷

74. MISO explains that this language that it had previously proposed to delete remains necessary if the procedure under proposed GIP section 4.4.1 is intended to be a separate technological change procedure, because GIP section 4.4.1.1 is intended to apply only to permissible technological advancements and removal of the language would leave MISO without a method for evaluating other potential modifications under subsections (a) and (b).¹²⁸

75. MISO also states that it proposes to revise GIP section 4.4.1.1 to better describe both the studies and criteria that MISO will use to evaluate technological advancement requests.¹²⁹ Specifically, MISO proposes to include the following text at the end of the first paragraph of GIP section 4.4.1.1:

The detailed analysis to demonstrate that the proposed change is not a Material Modification shall include steady-state (thermal/voltage), reactive power, short circuit/fault duty, and stability analyses unless the Transmission Provider deems one or more of these not necessary based on the nature of the change requested. The following criteria will be used to determine whether the proposed change is a Material Modification:

¹²⁷ *Id.* The newly proposed revisions to this language in the February Compliance Filing are noted in italics.

¹²⁸ *Id.*, Transmittal Letter at 15.

¹²⁹ *Id.* at 16-17.

- a. Any change in expected output of the Generating Facility that is higher than what was studied in the interconnection process unless a control equipment is employed to limit the injection at the [point of interconnection] to the level of Interconnection Service originally requested;
- b. An increase in short circuit current that degrades transmission system reliability;
- c. Angular stability performance and dynamic response that degrades transmission system reliability;
- d. Violation of steady-state thermal or voltage limits caused by the planned change utilizing the same criteria consistent with the Interconnection System Impact Study.¹³⁰

76. MISO explains that it included the words “unless the Transmission Provider deems one or more of these not necessary based on the nature of the change requested” to provide MISO with flexibility to refrain from performing an analysis if it is not applicable to the type of modification requested.¹³¹ MISO argues that this approach balances up-front transparency about the types of analyses to be performed with the flexibility to avoid unnecessary studies in individual cases.

77. Finally, MISO proposes to shorten the timeframe for performing studies from 60 to 30 days, as directed. Specifically, MISO’s proposed Tariff revisions provide that, if MISO concludes that additional data or studies are required to determine whether a proposed change is a permissible technological advancement or otherwise not a material modification, MISO shall inform the interconnection customer or Merchant High Voltage Direct Current connection customer of the required further data or studies. MISO proposes that it shall, within 30 days after receipt of any additional data required from the interconnection customer, perform such studies and communicate the results to the

¹³⁰ *Id.*, proposed MISO Tariff, Attach X, § 4.4.1.1 (Technological Change Procedure) (125.0.0).

¹³¹ *Id.*, Transmittal Letter at 16.

customer.¹³² Finally, MISO proposes revisions to its Tariff to correct a spelling error in the fifth line of section 4.4.4.1 for clarity.¹³³

iii. Protest

78. Leeward argues that the four criteria proposed by MISO for analyzing technological advancements are unreasonably restrictive because they may render a technological advancement impermissible under the GIP and automatically trigger a material modification, even if the advancement improves system reliability and efficiency through generation changes.¹³⁴

79. Leeward specifically protests MISO's second proposed criterion, which states that any proposed technological advancement that results in an increase in short circuit current "that degrades transmission system reliability" automatically triggers the standard for a material modification.¹³⁵ Leeward argues that this approach would cause many projects that actually increase efficiency to be deemed material modifications by MISO, simply because they reduce system losses. As an example, Leeward states that a more efficient transformer that reduces losses could be construed as a material modification under this criterion because it would inevitably increase fault current on the system. Leeward contends that MISO's proposal creates a disincentive to improve the efficiency of projects. Leeward suggests that MISO amend this criterion to state that MISO will determine if an increase in fault current causes equipment to become overdutied; if no such overdutying of equipment exists, Leeward reasons, there is no materially adverse impact and the proposed technological change should be approved. However, if equipment is overdutied, Leeward states that the interconnection customer should be allowed to fund upgrades to overdutied equipment. Leeward suggests that the change should only be considered a material modification if equipment is overdutied and the interconnection customer declines to fund any required upgrades.

80. Leeward also specifically protests MISO's third criterion, which states that any proposed technological advancement that: (1) modifies angular stability performance and dynamic response; and (2) degrades transmission system reliability would trigger a

¹³² *Id.*, proposed MISO Tariff, Attach X, § 4.4.1.1 (Technological Change Procedure) (125.0.0).

¹³³ *Id.*, Transmittal Letter at 17.

¹³⁴ Leeward Protest at 6-7.

¹³⁵ *Id.* at 7 (citing February Compliance Filing, Transmittal Letter at 15).

material modification.¹³⁶ Leeward contends that MISO's proposal would interpret any reduction in stability margin as a material modification. Leeward asserts that MISO should amend its proposal to permit a reduction in margin so long as it does not lead to an unstable condition. Leeward notes that interconnection customers are permitted to utilize excess transmission capacity available within the system, and that a reduction in stability margin is simply a measure of the use of the excess capacity. By amending the MISO proposal in its suggested way, Leeward asserts that MISO would recognize that some projects can significantly improve stability in one area, even if they slightly reduce margin in another. Leeward argues that MISO's proposal is too restrictive because it results in the hoarding of excess transmission capacity that should be available to interconnection customers.

81. Finally, Leeward asserts that MISO in practice is disregarding the language it proposes for material modifications, specifically the language stating that the "Interconnection Customer... shall submit a detailed analysis demonstrating why they believe [a permitted modification] is not a Material Modification."¹³⁷ Leeward states that it has a wind project in the Definitive Planning Phase of MISO's interconnection queue, and has asked MISO to perform an analysis to determine whether converting the project to a solar resource would trigger the material modification standard or whether such a change could be permissible. Leeward asserts that MISO has refused to analyze this modification, despite Leeward's offer to provide a technical analysis demonstrating that such conversion would have no material adverse impact on the interconnection or on system reliability.¹³⁸ Leeward asks the Commission to require MISO to enable an interconnection customer to demonstrate, through an appropriate study or analysis, that conversion of a specific project from wind to solar (or other resource change) does not result in a material modification, and thus under such circumstances, the change would not result in loss of the project's queue position.¹³⁹

iv. MISO Answer

82. MISO contends that Leeward's protest seeks changes to the material modification standard that go beyond the requirements of Order No. 845 and fundamentally alter the structure of material modification analysis.¹⁴⁰ MISO points to language in Order

¹³⁶ *Id.* at 8 (citing February Compliance Filing, Transmittal Letter at 15).

¹³⁷ *Id.* at 8-9 (citing February Compliance Filing, Transmittal Letter at 14).

¹³⁸ *Id.* at 9.

¹³⁹ *Id.* at 10.

¹⁴⁰ MISO Answer at 11.

No. 845-A stating that a technological change request should result in electrical performance that is equal to or better than before the technological change and should not cause any reliability concerns including short circuit capability limits.¹⁴¹ MISO states that Leeward's proposal abandons the "equal or better" standard by allowing an interconnection customer to degrade system performance with respect to short circuit current up to the point where equipment becomes overdutied. MISO argues its proposed Tariff language is clear that a proposed change will only be considered a material modification if the increase in short circuit current or change in angular stability performance and dynamic response "degrades transmission system reliability." MISO explains that, if short circuit current or change in angular stability performance and dynamic response does not degrade system reliability, then it would not fail these criteria.

83. MISO disagrees with Leeward's argument that the interconnection customer should be allowed to make changes and mitigate material adverse impacts on the system provided the interconnection customer funds the changes; MISO states that this argument goes beyond the requirements of Order No. 845 and would authorize almost any change regardless of materiality.¹⁴² MISO further argues that allowing an interconnection customer to both cause and mitigate new material impacts on the transmission system once studies are in progress requires MISO to reconduct both the study of impacts and required mitigating facilities. MISO also states that consideration of tradeoffs between different types of system requirements and allowing degradation with respect to one criterion if offset by gains in another area, as Leeward proposes in reference to stability margins, is the type of detailed analysis that requires full study through its Definitive Planning Phase.¹⁴³ MISO contends that, to the extent that Leeward seeks to alter existing approaches to material modification analysis, such reforms are outside the scope of Order Nos. 845 and 845-A.

84. Finally, MISO argues that the Commission should reject Leeward's claim that MISO is not following its Tariff by refusing to allow Leeward to switch a wind-powered generating facility proposed in its interconnection request for a solar-powered generating facility, as this claim is not within the scope of MISO's Order No. 845 compliance and is not appropriate for consideration in this proceeding.¹⁴⁴ MISO argues that Leeward's request is an inappropriate attempt to raise an FPA section 206 complaint under the guise of a protest.

¹⁴¹ *Id.* at 12 (citing Order No. 845-A, 166 FERC ¶ 61,137 at P 155).

¹⁴² *Id.* at 13.

¹⁴³ *Id.* at 14.

¹⁴⁴ *Id.* at 15.

v. **Leeward Answer**

85. Leeward explains that it is requesting that the Commission clarify whether, in accordance with Order Nos. 845 and 845-A, a transmission provider can forego any studies and analysis and automatically treat a change from a wind resource to a solar resource (or vice versa) as a material modification, even if the interconnection customer is willing to demonstrate that the proposed change results in “equal to or better” electrical performance.¹⁴⁵ Leeward states that it is not seeking a blanket determination that a proposal to change from a wind-powered project to a solar-powered project is *per se* a permissible technological advancement, but merely that such a switch is not a *de facto* material modification.¹⁴⁶ Leeward contends that this request does not belong in an FPA section 206 complaint, as Leeward is not asking the Commission to establish whether a MISO rate or practice is unjust and unreasonable.¹⁴⁷

86. Leeward argues that, despite the statement in Order No. 845 that the transmission provider would likely need to evaluate the impacts of changes between wind and solar technologies, MISO has provided no opportunity for Leeward to submit a study or evaluation demonstrating that the change from its wind-powered project to a solar-powered project results in “equal to or better” electrical performance and thus does not constitute a material modification.¹⁴⁸

87. Leeward states that proposed section 4.4.1 of MISO’s Attachment X outlines a process whereby an interconnection customer may submit a detailed analysis to demonstrate that a change that is not a permissible technological advancement is not a material modification.¹⁴⁹ Leeward argues that neither MISO’s existing Tariff nor its proposed section 4.4.1 technically precludes changes in fuel-type from proceeding through the technological change procedures if the interconnection customer demonstrates that the proposed change results in “equal to or better” electrical performance. Thus, Leeward argues, the proposed Tariff language does not forbid an interconnection customer’s detailed analysis so long as the proposed change is: “(a) a change in the technical parameters associated with the Generating Facility or [Merchant High Voltage Direct Current] Connection Customer technology other than a Permissible Technological Advancement; (b) a change to the Point of Interconnection or Point of

¹⁴⁵ Leeward Answer at 3.

¹⁴⁶ *Id.* at 5.

¹⁴⁷ *Id.* at 2.

¹⁴⁸ *Id.* at 4 (referencing Order No. 845, 163 FERC ¶ 61,043 at P 530).

¹⁴⁹ *Id.*

Connection permitted under Section 4.4; and (c) a Permissible Technological Advancement for the Generating Facility or [Merchant High Voltage Direct Current] Connection Customer.¹⁵⁰ Leeward contends that MISO's refusal to accept Leeward's study regarding the proposed change from a wind-powered resource to a solar-powered resource is thus contrary to the language set forth in the February Compliance Filing and Order Nos. 845 and 845-A.¹⁵¹

vi. **Commission Determination**

88. We find that MISO's proposed revisions to sections 4.4.1 and 4.4.1.1 of its GIP partially comply with the Commission's directives in the December 2019 Order. MISO's proposed revisions to section 4.4.1.1 of its GIP comply with the Commission's directive to file additional Tariff revisions to provide a more detailed explanation of the studies that MISO will conduct to determine whether the technological advancement request would be a material modification. However, we find that MISO has not fully complied with the Commission's directive to either justify its proposed 60-day timeline for completing additional studies or adopt a 30-day study result timeline. Order No. 845 required that a transmission provider must reach its determination of whether the proposed technological change is a material modification within 30 days of receiving the initial technological advancement request.¹⁵² MISO proposes to, within 30 days after receipt of any additional data that MISO requires the interconnection customer to submit, perform the required studies and communicate the results to the customer.¹⁵³ We find that MISO's proposal does not comply with Order No. 845 because it could allow MISO longer than 30 days from the receipt of the initial technological advancement request to reach its determination. Accordingly, we direct MISO to submit, within 120 days of the date of this order, a further compliance filing that revises its Tariff to provide that MISO

¹⁵⁰ *Id.* at 4-5 (citing February Compliance Filing, *proposed* MISO Tariff, Attach X, § 4.4.1 (Modifications) (125.0.0)). Leeward notes that the Commission made this finding in an analogous order that addressed similar proposed language from PJM Interconnection, L.L.C. *Id.* at 4 (citing *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,145, at P 58 (2020) (*PJM*)).

¹⁵¹ *Id.* at 5.

¹⁵² Order No. 845, 163 FERC ¶ 61,043 at P 535; Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

¹⁵³ February Compliance Filing, *proposed* MISO Tariff, Attach X, § 4.4.1.1 (Technological Change Procedure) (125.0.0).

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

89. We disagree with Leeward's argument that MISO's second proposed criterion for evaluating technological advancement requests would cause projects that increase efficiency to be deemed material modifications by MISO, simply because they reduce system losses. While it is generally true that decreased losses or lower impedance on a transformer can cause short-circuit current to increase, MISO's proposed inclusion of the phrase "that degrades transmission system reliability" will capture only the increases in short-circuit current that degrade transmission system reliability.

90. We similarly disagree with Leeward's argument that MISO should amend its third proposed criterion for evaluating technological advancement requests to permit a reduction in margin so long as it does not lead to an unstable condition. MISO does not propose to reject a technological advancement request under the third criterion of section 4.4.1.1 simply because the request would result in changes to angular stability performance and dynamic response.¹⁵⁴ Instead, as MISO explains, its proposed Tariff language prohibits "a change in angular stability performance and dynamic response that *degrades* transmission system reliability."¹⁵⁵ We find that MISO's proposed inclusion of the phrase "that degrades transmission system reliability" is consistent with the "equal to or better" standard of electrical performance established in Order Nos. 845 and 845-A. Moreover, MISO asserts that if a change in angular stability performance and dynamic response does not degrade system reliability, then the technological advancement request would not fail these criteria.

91. We also agree with MISO that considering tradeoffs between different types of system requirements and allowing degradation with respect to one criterion if offset by gains in another area, as in the example that Leeward provides with respect to stability margins, is a detailed analysis that requires an in-depth study. To the extent that a proposed technological advancement request does not demonstrate "equal to or better electrical performance," the request is not automatically deemed to be a material modification, but will instead be processed pursuant to the transmission provider's existing material modification provisions.¹⁵⁶

92. In response to Leeward's specific request to be able to demonstrate that a change from a wind-powered generating facility to a solar-powered generating facility results in "equal to or better" electrical performance, we find that Order Nos. 845 and 845-A allow

¹⁵⁴ MISO Answer at 12.

¹⁵⁵ *Id.*

¹⁵⁶ See Order No. 845-A, 166 FERC ¶ 61,137 at P 155.

an interconnection customer to provide evidence that a requested technological change results in “equal to or better” performance and require MISO to evaluate such a demonstration.¹⁵⁷ We agree with Leeward that MISO’s Tariff requires Leeward to submit evidence that shows that its proposed technological change results in “equal to or better” electrical performance, and does not constitute a material modification.¹⁵⁸ Should Leeward fail to make such a demonstration, the proposed change should proceed through the material modification procedures.

f. Other Compliance Directives

i. Transparency Regarding Study Models and Assumptions

93. In the December 2019 Order, the Commission found that MISO’s proposed Tariff language generally complied with the requirements of Order Nos. 845 and 845-A, with adjustments to the Commission’s *pro forma* LGIP language to reflect the specific terminology in MISO’s Tariff.¹⁵⁹ However, the Commission noted that, in Order No. 845, the Commission made the following revision to section 2.3 of the *pro forma* LGIP: “Transmission Provider shall maintain ~~provide~~ base power flow, short circuit and stability databases, including all underlying assumptions, and contingency lists”¹⁶⁰ The Commission stated that, in section 2.3 of MISO’s proposed GIP, MISO retained the word “provide” instead of using the word “maintain.” Accordingly, the Commission directed MISO to file a further compliance filing to revise section 2.3 of its GIP to change the word “provide” to “maintain.”

¹⁵⁷ *See id.*

¹⁵⁸ MISO can use the information submitted with the interconnection customer’s demonstration, along with any of MISO’s own analyses, to review the request. *See* Order No. 845, 163 FERC ¶ 61,043 at P 519 (“For the transmission provider to determine that a proposed technological advancement is not a material modification, the procedure must specify the information that the interconnection customer must submit as part of a technological advancement request.”).

¹⁵⁹ December 2019 Order, 169 FERC ¶ 61,221 at P 74.

¹⁶⁰ *Id.* (citing *pro forma* LGIP § 2.3 (emphasis added)).

94. In the February Compliance Filing, MISO proposes to revise section 2.3 of its GIP to change the word “provide” to “maintain” to conform to the language in the Commission’s *pro forma* LGIP.¹⁶¹

ii. Provisional Interconnection Service

95. In the December 2019 Order, the Commission found that MISO’s proposed revisions to the Provisional Interconnection Service provisions in its GIP and its *pro forma* GIA complied with the requirements of Order Nos. 845 and 845-A.¹⁶² However, the Commission directed MISO to file revisions to its Tariff to correct a typographical error in proposed article 5.9.2 of MISO’s *pro forma* GIA, in order to fully incorporate the language in article 5.9.2 of the Commission’s *pro forma* LGIA.¹⁶³

96. In the February Compliance Filing, MISO proposes revisions to section 5.9.2 of its *pro forma* GIA to correct the error and fully incorporate the language in article 5.9.2 of the Commission’s *pro forma* LGIA.¹⁶⁴

iii. Commission Determination

97. We find that MISO’s proposed revisions pertaining to Transparency Regarding Study Models and Assumptions and Provisional Interconnection Service comply with the directives in the December 2019 Order.

The Commission orders:

(A) AWEA’s request for rehearing of the December 2019 Order is hereby denied, as discussed in the body of this order.

(B) MISO’s compliance filing is hereby accepted, to become effective December 20, 2019, as requested, subject to further compliance, as discussed in the body of this order.

¹⁶¹ February Compliance Filing, Transmittal Letter at 10, *proposed* MISO Tariff, Attach X, § 2.3 (Base Case Data) (125.0.0).

¹⁶² December 2019 Order, 169 FERC ¶ 61,221 at P 113.

¹⁶³ *Id.* P 114.

¹⁶⁴ February Compliance Filing, Transmittal Letter at 16, *proposed* MISO Tariff, Attach X, app. 6, § 5.9.2 (Provisional Interconnection Service) (78.0.0).

(C) MISO is hereby directed to submit a further compliance filing within 120 days of the date of this order, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.