

185 FERC ¶ 61,011
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Willie L. Phillips, Acting Chairman;
James P. Danly, Allison Clements,
and Mark C. Christie.

Midcontinent Independent System Operator, Inc. Docket Nos. ER22-1640-000
ER22-1640-001

ORDER ON COMPLIANCE FILING

(Issued October 10, 2023)

1. On April 14, 2022, as amended on October 11, 2022, Midcontinent Independent System Operator, Inc. (MISO), submitted proposed revisions to its Open Access Transmission, Energy and Operating Reserve Markets Tariff (Tariff)¹ in compliance with the requirements of Order No. 2222,² which removes barriers to the participation of distributed energy resource aggregations in the capacity, energy, and ancillary service markets operated by Regional Transmission Organizations and Independent System Operators (RTO/ISO). In this order, we accept MISO's compliance filing, subject to a further compliance filing to be submitted within 60 days of the date of issuance of this order, as discussed below.

I. Background

2. In Order No. 2222, the Commission adopted reforms to remove barriers to the participation of distributed energy resource aggregations in the RTO/ISO markets.³ The Commission modified section 35.28 of its regulations⁴ pursuant to its authority under

¹ Appendix A lists the Tariff sections filed by MISO and accepted by the Commission. Capitalized terms that are not defined in this order have the meaning specified in the Tariff.

² *Participation of Distributed Energy Res. Aggregations in Mkts. Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators*, Order No. 2222, 172 FERC ¶ 61,247 (2020), *order on reh'g*, Order No. 2222-A, 174 FERC ¶ 61,197, *order on reh'g*, Order No. 2222-B, 175 FERC ¶ 61,227 (2021).

³ *Id.* P 1.

⁴ 18 C.F.R. § 35.28 (2022).

Federal Power Act (FPA) section 206⁵ to require each RTO/ISO to revise its tariff to ensure that its market rules facilitate the participation of distributed energy resource aggregations. The Commission found that, by removing barriers to the participation of distributed energy resource aggregations in the RTO/ISO markets, Order No. 2222 will enhance competition and, in turn, help ensure that the RTO/ISO markets produce just and reasonable rates.

3. In Order No. 2222, the Commission amended its regulations to require each RTO/ISO to include tariff provisions addressing distributed energy resource aggregations that: (1) allow distributed energy resource aggregations to participate directly in RTO/ISO markets and establish distributed energy resource aggregators as a type of market participant; (2) allow distributed energy resource aggregators to register distributed energy resource aggregations under one or more participation models that accommodate the physical and operational characteristics of the distributed energy resource aggregations; (3) establish a minimum size requirement for distributed energy resource aggregations that does not exceed 100 kilowatts (kW); (4) address locational requirements for distributed energy resource aggregations; (5) address distribution factors and bidding parameters for distributed energy resource aggregations; (6) address information and data requirements for distributed energy resource aggregations; (7) address metering and telemetry requirements for distributed energy resource aggregations; (8) address coordination between the RTO/ISO, the distributed energy resource aggregator, the distribution utility, and the relevant electric retail regulatory authorities (RERRA); (9) address modifications to the list of resources in a distributed energy resource aggregation; and (10) address market participation agreements for distributed energy resource aggregators.⁶ Additionally, under Order No. 2222, each RTO/ISO must accept bids from a distributed energy resource aggregator if its aggregation includes distributed energy resources that are customers of utilities that distributed more than 4 million megawatt-hours (MWh) in the previous fiscal year. An RTO/ISO must not accept bids from a distributed energy resource aggregator if its aggregation includes distributed energy resources that are customers of utilities that distributed 4 million MWh or less in the previous fiscal year, unless the RERRA permits such customers to be bid into RTO/ISO markets by a distributed energy resource aggregator.

II. Compliance Filing

4. In its April 14, 2022 filing, MISO states that its proposed revisions include Tariff modifications to create a pathway for Distributed Energy Resource Aggregators

⁵ 16 U.S.C. § 824e.

⁶ Order No. 2222, 172 FERC ¶ 61,247 at P 8.

(DERAs)⁷ to participate in MISO markets by: (1) creating a new market participation model for DERAs; (2) establishing eligibility requirements for DERA participation, including size, location, information and data requirements; (3) setting bidding parameters for DERAs; (4) requiring metering and telemetry arrangements for DERAs; and (5) providing for coordination with distribution utilities and RERRAs for DERA, Distributed Energy Aggregated Resource (DEAR),⁸ and Distributed Energy Resource (DER)⁹ registration, operations, and dispute resolution purposes.

5. MISO requests that the Commission grant an effective date of October 1, 2029, for the proposed Tariff revisions.

6. On August 12, 2022, Commission staff issued a data request advising MISO that additional information was necessary to process its compliance filing (Data Request).¹⁰ On October 11, 2022, in Docket No. ER22-1640-001, MISO filed a response to the Data Request, which amended its compliance filing (Data Request Response).

⁷ A DERA is “[a] Market Participant representing a Distributed Energy Aggregated Resource.” MISO, Proposed Tariff, Module A, § 1.D (Definitions) (63.0.0).

⁸ A DEAR is “[a]n aggregation of Distributed Energy Resource Groups and Energy Efficiency Resources, which are registered as a single Resource for participation in the Energy and Operating Reserve Markets, and/or as a Planning Resource. A DEAR may not have a Capacity smaller than 100kW, may inject energy for sale in the Energy and Operating Reserve Market and withdraw energy for later sale in the Energy and Operating Reserve Market, and may consist of a single Distributed Energy Resource. To be able to participate in the Energy and Operating Reserve Markets, the aggregated Operable Capacity of the Distributed Energy Resource Groups that comprise the DEAR must be at least 100 kW.” *Id.*

⁹ A DER is “[a]ny resource located on the distribution system, any subsystem thereof, or behind-a-customer meter. These resources may include but are not limited to: electric storage resources, distributed generation, demand response, energy efficiency, thermal storage, and electric vehicles and their supply equipment. For purposes of this definition, the distribution system includes all electric facilities owned by a Distribution Provider, as that term is defined by [the North American Electric Reliability Corporation (NERC)], regardless of how such facilities are classified by the Distribution Provider that: (1) are connected to the Transmission System; (2) are not a part of the Transmission System, and (3) are not connected to the Transmission System solely through facilities under the control of another transmission provider.” *Id.*

¹⁰ *Midcontinent Indep. Sys. Operator, Inc.*, Docket No. ER22-1640-000, at 1 (issued Aug. 12, 2022).

III. Notices of Filings and Responsive Pleadings

7. Notice of MISO's filing was published in the *Federal Register*, 87 Fed. Reg. 23,512 (Apr. 20, 2022), with interventions and protests due on or before June 6, 2022.¹¹

8. Notice of MISO's Data Request Response was published in the *Federal Register*, 87 Fed. Reg. 62,839 (Oct. 17, 2022), with interventions and protests due on or before November 1, 2022.

9. Illinois Commerce Commission (Illinois Commission), Indiana Utility Regulatory Commission (Indiana Commission), Louisiana Public Service Commission, Michigan Public Service Commission (Michigan Commission), Mississippi Public Service Commission, Missouri Public Service Commission (Missouri Commission), Organization of MISO States, Inc. (OMS), and Public Utility Commission of Texas each filed a notice of intervention.

10. Advanced Energy Economy (AEE); Advanced Energy Management Alliance (AEMA); Ameren Services Company (Ameren); American Municipal Power, Inc.; American Public Power Association; Citizens Action Coalition of Indiana, Inc.; Coalition of MISO Transmission Customers; Consumers Energy Company (Consumers Energy); Cooperative Energy; Council of the City of New Orleans; DTE Electric Company (DTE Electric); Duke Energy Corporation; Edison Electric Institute; Enerwise Global Technologies, LLC; Entegrity Energy Partners, LLC (Entegrity); Entergy Services, LLC (Entergy);¹² Environmental Law & Policy Center; Minnesota Attorney General's Office; MISO Transmission Owners (MISO TOs);¹³ National Rural Electric Cooperative

¹¹ On April 15, 2022, the Commission issued an errata notice correcting and extending the comments due date from May 5, 2022 to June 6, 2022.

¹² Entergy's filing is on behalf of Entergy Arkansas, LLC, Entergy Louisiana, LLC, Entergy Mississippi, LLC, Entergy New Orleans, LLC, and Entergy Texas, Inc.

¹³ MISO TOs for this proceeding consist of: Ameren Services Company, as agent for Union Electric Company, Ameren Illinois Company and Ameren Transmission Company of Illinois; Big Rivers Electric Corporation; Central Minnesota Municipal Power Agency; City Water, Light & Power (Springfield, IL); Cleco Power LLC; Cooperative Energy; Dairyland Power Cooperative; Duke Energy Business Services, LLC for Duke Energy Indiana, LLC; East Texas Electric Cooperative; Entergy Arkansas, LLC; Entergy Louisiana, LLC; Entergy Mississippi, LLC; Entergy New Orleans, LLC; Entergy Texas, Inc.; Great River Energy; GridLiance Heartland LLC; Hoosier Energy Rural Electric Cooperative, Inc.; Indiana Municipal Power Agency; Indianapolis Power & Light Company; International Transmission Company; ITC Midwest LLC; Lafayette Utilities System; Michigan Electric Transmission Company, LLC; MidAmerican Energy

Association; Natural Resources Defense Council; NRG Power Marketing LLC; R Street Institute (R Street); Sierra Club; Solar Energy Industries Association (SEIA); Solar United Neighbors; Union of Concerned Scientists; Upper Michigan Energy Resources Corporation; Voltus, Inc. (Voltus); Wisconsin Electric Power Company; Wisconsin Public Service Corporation; WPPI Energy (WPPI); and Xcel Energy Services Inc. (Xcel) filed timely motions to intervene.

11. AEE and SEIA (collectively, AEE/SEIA), AEMA, Ameren, Consumers Energy, DTE Electric, Entegry, Entergy, Michigan Commission, MISO TOs, Missouri Commission, OMS, Public Interest Organizations,¹⁴ Voltus, and WPPI filed protests. Alliant Energy Corporate Services, Inc. (Alliant), Illinois Commission, Indiana Commission, and Xcel filed comments.

12. On July 8, 2022, MISO filed a motion for leave to answer and answer (MISO Answer). On July 21, 2022, Entergy filed a motion to lodge the 2021 State of the Market Report for the MISO Electricity Markets issued by the Independent Market Monitor (IMM). On July 25, 2022, WPPI filed a motion for leave to answer and answer. On July 27, 2022, R Street filed an answer. On August 2, 2022, Xcel filed a motion for leave to answer and answer.

13. In response to MISO's Data Request Response, AEE/SEIA and Public Interest Organizations¹⁵ filed protests and AEMA filed comments. On December 2, 2022, MISO filed a motion for leave to answer and answer (Answer to Data Request Response Protests).

Company; Minnesota Power (and its subsidiary Superior Water, L&P); Montana-Dakota Utilities Co.; Northern Indiana Public Service Company LLC; Northern States Power Company, a Minnesota corporation, and Northern States Power Company, a Wisconsin corporation, subsidiaries of Xcel Energy Inc.; Northwestern Wisconsin Electric Company; Otter Tail Power Company; Prairie Power, Inc.; Southern Illinois Power Cooperative; Southern Indiana Gas & Electric Company; Southern Minnesota Municipal Power Agency; Wabash Valley Power Association, Inc.; and Wolverine Power Supply Cooperative, Inc.

¹⁴ Public Interest Organizations include: Carmel Green Initiative, Inc.; Citizens Action Coalition of Indiana, Inc.; Energy Matters Community Coalition, Inc.; Environmental Law & Policy Center; Natural Resources Defense Council; Sierra Club; Solar United Neighbors; Solarize Indiana, Inc.; Sustainable FERC Project; and Union of Concerned Scientists.

¹⁵ Public Interest Organizations, for the purposes of the response to MISO's Data Request Response, include Sierra Club and Union of Concerned Scientists.

IV. Discussion

A. Procedural Matters

14. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2022), the notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Entities that filed comments and/or protests but did not file a notice of intervention or motion to intervene are not parties to this proceeding.¹⁶

15. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2022), 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.

16. We grant Entergy's motion to lodge the 2021 State of the Market Report for the MISO Electricity Markets because it provides information that assisted us in our decision-making process.

B. Substantive Matters

17. As explained in further detail below, we find that MISO's proposal partially complies with Order No. 2222. Accordingly, we accept MISO's compliance filing, subject to a further compliance filing to be submitted within 60 days of the date of issuance of this order, as discussed below.

18. As a preliminary matter, we find that MISO has complied with the requirements of Order No. 2222 to: (1) accept bids from a distributed energy resource aggregator if its aggregation includes distributed energy resources that are customers of utilities that distributed more than 4 million MWh in the previous fiscal year, and not accept bids from a distributed energy resource aggregator if its aggregation includes distributed energy resources that are customers of utilities that distributed 4 million MWh or less in the previous fiscal year, unless the RERRA allows such customers to be bid into RTO/ISO

¹⁶ As part of Public Interest Organizations' comments and protest, Carmel Green Initiative, Inc., Energy Matters Community Coalition, Inc., and Solarize Indiana, Inc. filed comments and protest but did not file motions to intervene. Although we do not grant party status to Carmel Green Initiative, Inc., Energy Matters Community Coalition, Inc., and Solarize Indiana, Inc., we address their pleadings in this order.

markets by a distributed energy resource aggregator;¹⁷ (2) subject the participation of demand response in a distributed energy resource aggregation to the opt-out and opt-in requirements of Order Nos. 719 and 719-A;¹⁸ (3) propose definitions for distributed energy resource and distributed energy resource aggregator that are consistent in scope and applicability with the Commission's definitions;¹⁹ (4) propose a maximum capacity requirement for individual distributed energy resources participating in its markets through a distributed energy resource aggregation or, alternatively, to explain why such a requirement is not necessary;²⁰ and (5) allow a single qualifying distributed energy resource to avail itself of the proposed distributed energy resource aggregation rules by serving as its own distributed energy resource aggregator.²¹ MISO's compliance with these requirements is not contested in this proceeding. We address the remaining compliance requirements and comments and protests below.

1. Interconnection

19. In Order No. 2222, the Commission declined to exercise its jurisdiction over the interconnections of distributed energy resources to distribution facilities for the purpose of participating in RTO/ISO markets exclusively as part of a distributed energy resource aggregation.²² The Commission therefore stated that it will not require standard interconnection procedures and agreements or wholesale distribution tariffs for such

¹⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 65; Transmittal at 29; MISO Proposed Tariff, Module C, § 38.7 (31.0.0), § 38.7.A.iii.1 (Distributed Energy Resource Aggregators).

¹⁸ Order No. 2222-B, 175 FERC ¶ 61,227 at P 29; Transmittal at 29; MISO Proposed Tariff, Module C, § 38.7 (31.0.0), § 38.7.A.iii.1 (Distributed Energy Resource Aggregators); *Wholesale Competition in Regions with Organized Elec. Mkts.*, Order No. 719, 125 FERC ¶ 61,071 (2008), *order on reh'g*, Order No. 719-A, 128 FERC ¶ 61,059, *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009).

¹⁹ Order No. 2222, 172 FERC ¶ 61,247 at PP 114-115, 118; Transmittal at 38-39; Data Request Response at 3-4; MISO, Proposed Tariff, Module A, § 1.D (Definitions) (63.0.0).

²⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 179; Transmittal at 9; Data Request Response at 18.

²¹ Order No. 2222, 172 FERC ¶ 61,247 at P 185. *See* Transmittal at 9; *see also* MISO, Proposed Tariff, Module A, § 1.D (Definitions) (63.0.0). MISO's definition of a DEAR specifically permits that it may consist of a single DER.

²² Order No. 2222, 172 FERC ¶ 61,247 at P 90.

interconnections. The Commission also stated that Order No. 2222 does not revise the Commission's jurisdictional approach to the interconnections of Qualifying Facilities (QFs) that participate in distributed energy resource aggregations.²³ In Order No. 2222-A, the Commission clarified that the Commission declined to exercise jurisdiction over the interconnections of distributed energy resources, including the interconnections of QFs, to distribution facilities for the purpose of participating in RTO/ISO markets exclusively as part of a distributed energy resource aggregation.²⁴

20. Recognizing that distributed energy resources may already have interconnected pursuant to procedures that were accepted by the Commission prior to the effective date of Order No. 2222, the Commission stated that it is not requiring distributed energy resources that already interconnected under Commission-jurisdictional procedures to convert to state or local interconnection agreements.²⁵ The Commission required each RTO/ISO to make any necessary tariff changes to reflect this guidance.²⁶

a. Filing

21. MISO proposes to revise section 12 of the Tariff to exempt from its dispute resolution procedures those disputes relating to “the interconnection of a DER with an

²³ *Id.* P 98 (citing *Standardization of Generator Interconnection Agreements & Procs.*, Order No. 2003, 104 FERC ¶ 61,103, at PP 813-15 (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); *Standardization of Small Generator Interconnection Agreements & Procs.*, Order No. 2006, 111 FERC ¶ 61,220, PP 516-18, *order on reh'g*, Order No. 2006-A, 113 FERC ¶ 61,195 (2005), *order granting clarification*, Order No. 2006-B, 116 FERC ¶ 61,046 (2006); *Reform of Generator Interconnection Procs. & 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)).

²⁴ Order No. 2222-A, 174 FERC ¶ 61,197 at P 43.

²⁵ Order No. 2222, 172 FERC ¶ 61,247 at P 103.

²⁶ *Id.* P 104.

[electric distribution company (EDC)], except disputes regarding the potential impact of such interconnection, of the impact of a DEAR, on the Transmission System.”²⁷

22. As discussed in more detail below,²⁸ MISO proposes Affected System studies for DER participation and transmission owner and MISO Reliability Reviews of potential DER impacts on the transmission system.

b. Comments/Protests

23. AEMA argues that MISO is potentially delaying DEAR registration by using Affected System studies as the methodology for DEAR interconnections and insisting that a DEAR interconnection to one transmission owner will potentially affect other transmission owners.²⁹ AEMA states that MISO does not explain how it will monitor DEAR interconnection and provide transparency to DERAs at different stages of the study process. AEMA asserts that the Commission should direct MISO to revise its proposal to appropriately address the coordination of the DEAR interconnection review process and Affected System studies.³⁰ AEMA contends that the Commission should direct MISO to define the trigger, scope and timing of safety and reliability studies for DEARs.³¹ AEMA also argues that MISO’s proposal to address interconnection review details in the Business Practices Manuals (BPM) without any schedule renders the interconnection process vague and unclear.³²

c. Data Request Response

24. In response to Commission staff’s request that MISO explain how it determined not to revise the Tariff to reflect the Commission’s decision to decline to exercise its jurisdiction over the interconnections of distributed energy resources to distribution facilities for the purpose of participating in RTO/ISO markets as part of a distributed energy resource aggregation, MISO states that interconnections of DERs to distribution facilities to participate exclusively through aggregation in the wholesale markets are

²⁷ Transmittal at 30; MISO Proposed Tariff, Module A, § 12.f (Dispute Resolution Procedures) (33.0.0).

²⁸ *See infra* Part IV.B.7.b.i.

²⁹ AEMA Protest at 20.

³⁰ *Id.* at 21.

³¹ *Id.* at 21-22.

³² *Id.* at 22.

subject to state and local jurisdiction, not the Tariff.³³ MISO states that it added a new part f to section 12 of the Tariff to clarify that disputes relating to the interconnection of DERs with an EDC are not subject to the Tariff. MISO asserts that this proposed revision reflects the Commission's decision to not exercise jurisdiction over the interconnections of DERs, and no further revisions are necessary.

25. In addition, MISO states that a DER would also be able to enter the MISO interconnection process as provided in the Tariff. MISO states that it considers the Transmission System under MISO's planning and operational purview to be an Affected System, as defined in Attachment X (Generator Interconnection Procedures) of the Tariff,³⁴ as it relates to potential DER interconnection system impacts. MISO notes that, similar to several Affected System studies processes and bilateral agreements, its compliance filing proposes that DER interconnections be managed through business practices. However, MISO states that it is facilitating an active stakeholder process through MISO's Interconnection Process Working Group (IPWG) to address MISO Affected Systems studies for DER interconnection, which will include evaluating any necessary business practice or Tariff changes to implement any proposed process changes.

26. In response to Commission staff's request to identify any Tariff sections that MISO relied upon to determine that no Tariff revisions were necessary, MISO states that it verified that its Generator Interconnection Procedures do not apply to DER interconnections because the Generator Interconnection Procedures are only applicable to MISO's generator interconnection queue.³⁵

d. Commission Determination

27. We find that MISO's proposal partially complies with Order No. 2222 with respect to interconnection. Except as discussed below, MISO's proposal is consistent with the Commission's decision to decline to exercise its jurisdiction over the interconnections of distributed energy resources to distribution facilities for the purpose of participating in RTO/ISO markets exclusively as part of a distributed energy resource aggregation because, in MISO, DERs seeking to interconnect to the distribution system to participate in MISO's markets through a DEAR will interconnect according to the terms of a local interconnection process subject to state and local jurisdiction, and not according

³³ Data Request Response at 2.

³⁴ MISO, Tariff, attach. X (Generator Interconnection Procedures) (157.0.0).

³⁵ Data Request Response at 3.

to the Tariff.³⁶ Consequently, as MISO proposes, disputes relating to the interconnection of a DER with an EDC should not be subject to MISO's dispute resolution procedures.

28. However, we note that MISO proposes that the following disputes be subject to MISO's dispute resolution procedures: "disputes regarding the potential impact of such interconnection, of the impact of a DEAR, on the Transmission System."³⁷ It is unclear whether MISO intends that its dispute resolution procedures apply to disputes regarding (1) the potential impact on the Transmission System of the interconnection of a DER; (2) the potential impact on the Transmission System of the interconnection of a DER participating exclusively as part of a DEAR; and/or (3) the impact on the Transmission System of a DEAR. Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing clarifying the precise type or types of interconnection dispute that is subject to the dispute resolution procedures under its Tariff and to revise the Tariff as necessary.

29. We also note that MISO states that it is facilitating an active stakeholder process through MISO's IPWG to address MISO Affected Systems studies for DER interconnection.³⁸ It is not clear in what circumstances such studies would occur and whether, for instance, MISO would conduct such studies as part of the MISO Reliability Review. We therefore direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing clarifying whether the Affected System studies for DER interconnection are conducted (1) as part of the MISO Reliability Review, (2) as part of MISO's Generator Interconnection Procedures, or (3) separate from both of these processes, and to revise the Tariff as necessary to specify. In addition, as part of this further compliance filing, we require MISO to explain its statement that a DER would

³⁶ Order No. 2222, 172 FERC ¶ 61,247 at P 90; Data Request Response at 2; MISO, Tariff, attach. X, app. 1 (Interconnection Request for a Generating Facility) (53.0.0) (Interconnection Customers submit a request to interconnect a Generating Facility "with the Transmission System"); MISO, Tariff, Module A, § 1.T (Definitions) (42.0.0) (defining Transmission System in part by noting that "[w]hile not part of the Transmission System, service over Distribution Facilities is available through the execution of a Service Agreement pursuant to Schedule 11 of this Tariff").

³⁷ The full provision in section 12 of the Tariff states that the following disputes are not subject to the Tariff: "Disputes relating to the interconnection of a DER with an EDC, except disputes regarding the potential impact of such interconnection, of the impact of a DEAR, on the Transmission System." MISO Proposed Tariff, Module A, 12.f (Dispute Resolution Procedures) (33.0.0).

³⁸ Data Request Response at 2.

also be able to enter the MISO interconnection process as provided in the Tariff and cite to the relevant Tariff language that supports this statement.

30. Finally, we note that, in Order No. 2222, the Commission declined to exercise jurisdiction over the interconnections of distributed energy resources to distribution facilities for the purpose of participating in RTO/ISO markets exclusively as part of a distributed energy resource aggregation.³⁹ The Commission did not, however, decline to exercise jurisdiction over the interconnection of distributed energy resources to distribution facilities for purposes of participating in RTO/ISO markets outside of a distributed energy resource aggregation. MISO states that it verified that its Generator Interconnection Procedures do not apply to DER interconnections.⁴⁰ We direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing clarifying whether, and if so, how a DER participating independently of a DEAR would be able to interconnect pursuant to MISO's Tariff, and to revise the Tariff as necessary.

2. Eligibility to Participate in RTO/ISO Markets through a Distributed Energy Resource Aggregator

a. Participation Model

31. In Order No. 2222, the Commission added section 35.28(g)(12)(i) to the Commission's regulations to require each RTO/ISO to establish distributed energy resource aggregators as a type of market participant and to allow distributed energy resource aggregators to register distributed energy resource aggregations under one or more participation models in the RTO's/ISO's tariff that accommodate the physical and operational characteristics of the distributed energy resource aggregation.⁴¹ The Commission explained that each RTO/ISO can comply with the requirement to allow distributed energy resource aggregators to participate in its markets by modifying its existing participation models to facilitate the participation of distributed energy resource aggregations, by establishing one or more new participation models for distributed energy resource aggregations, or by adopting a combination of those two approaches.⁴² The Commission stated that it will evaluate each proposal submitted on compliance to determine whether the proposal meets the goals of Order No. 2222 to allow distributed

³⁹ Order No. 2222, 172 FERC ¶ 61,247 at P 90.

⁴⁰ Data Request Response at 3.

⁴¹ Order No. 2222, 172 FERC ¶ 61,247 at P 130.

⁴² *Id.*

energy resources to provide all services that they are technically capable of providing through aggregation.⁴³

i. Filing

32. MISO proposes to establish a DERA as a new Market Participant that is able to submit offers in MISO's Energy and Operating Reserve Markets and is eligible to register and enroll DEARs.⁴⁴ MISO states that the DERA must first register as a Market Participant before enrolling any DEARs. MISO asserts that the registration process includes: (1) a review to ensure that there is no dual compensation for wholesale and retail; (2) reliability reviews from the EDC; and (3) the addition of the DEAR to the commercial model. MISO also states that DERAs must execute MISO's Market Participant Agreement, Attachment W, to participate in MISO's markets. According to MISO, it will not have a direct contractual relationship with the individual DEARs represented by the DERA. MISO states that this is similar to any other relationship between MISO and Market Participants that represent multiple assets in MISO's markets.

33. MISO states that its proposed DEAR participation model allows DERAs to participate in applicable MISO markets based on the services that the DEARs are technically capable of providing.⁴⁵ MISO states that the DERA, or its delegate, will relay DEAR dispatch instructions to the individual DERs.⁴⁶ MISO states that DEARs must participate in MISO's Day-Ahead Energy and Operating Reserve Market (Day-Ahead Market) and/or the Real-Time Energy and Operating Reserve Market (Real-Time Market) through a single Elemental Pricing Node (EP Node) utilizing self-commitment under normal conditions while having the potential to be called on by MISO during emergency conditions. MISO asserts that DEARs may participate as Capacity Resources in MISO's annual Planning Resource Auction.

⁴³ *Id.* In Order No. 2222, the Commission clarified that "technically capable" of providing a service means meeting all of the technical, operational, and/or performance requirements that are necessary to reliably provide that service. *Id.* P 3 n.9 (citing *Elec. Storage Participation in Mkts. Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators*, Order No. 841, 162 FERC ¶ 61,127, at P 78 (2018), *order on reh'g*, Order No. 841-A, 167 FERC ¶ 61,154 (2019), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 964 F.3d 1177 (D.C. Cir. 2020)).

⁴⁴ Transmittal at 4.

⁴⁵ *Id.* at 5.

⁴⁶ Filing, Testimony of Laura Rauch (Rauch Test.), at 6.

34. MISO proposes that DEARs will be monitored by the IMM and subject to the market monitoring provisions in Module D of the Tariff, which MISO states currently exempts all resources that are less than 10 megawatts (MW).⁴⁷ MISO also proposes to revise section 53.1.h of the Tariff to allow the IMM to review the conduct of an EDC for affiliate favoritism or preference. MISO maintains that DEARs should be subject to the same market monitoring provisions as other resources in MISO's markets, especially given a DEAR's ability to participate in MISO's Planning Resource Auction and contribute to Resource Adequacy in the MISO region.

ii. Comments/Protests

35. AEMA supports MISO's proposal to establish a new participation model for distributed energy resource aggregation but states that the proposal lacks detail on how DEARs will participate in the new Planning Resource Auction design.⁴⁸ AEMA asserts that MISO's position is that the DEAR model can demonstrate deliverability for the capacity market by going through the EDC review process and that MISO has asked stakeholders to follow the IPWG for the EDC/TO/MISO technical review coordination framework.⁴⁹ AEMA contends that MISO's proposal lacks clarity on its proposed DEAR capacity accreditation, such as how to sum the individual accreditation of the underlying DERs and DER Groups⁵⁰ within a DEAR. AEMA avers that the lack of specificity on key elements related to the valuation of DERs is a major barrier to their development.

36. Additionally, AEMA avers that MISO's proposed self-commitment requirement for all DEARs poses barriers to participation, reduces efficiency, and is restrictive and not needed for all resource sizes.⁵¹ AEMA states that MISO justifies mandating DEARs to self-commit for bidding because MISO's DEAR model is based on a Commission-approved Electric Storage Resource model, which has self-commitment functionality, but AEMA notes that a DEAR may be composed completely of generation resources.⁵²

⁴⁷ Transmittal at 30-31.

⁴⁸ AEMA Protest at 13.

⁴⁹ *Id.* at 14.

⁵⁰ MISO explains that each homogeneous aggregation of Distributed Energy Resources within a heterogeneous DEAR is defined as a "DER Group" and that these DER Groups will be used for settlements purposes and for measurement and verification. Transmittal at 6.

⁵¹ AEMA Protest at 14.

⁵² *Id.* at 15.

AEMA states that during a stakeholder meeting, MISO suggested that self-commitment was necessary because of the granularity of the market-clearing engine and the minimum size requirement for DEAR of 100 kW.⁵³ AEMA states that MISO implied that the clearing engine could not effectively reach a commitment solution for very small resources because they were smaller than the dead band of the solution. AEMA states that the Commission should reject MISO's filing and request details on the impact of commitment status and resource sizes on market clearing engine runtime for both the current legacy system and the expected performance of the future system after the Market System Enhancement project is implemented, and MISO should propose Tariff changes to accommodate options for DEAR bidding parameters.⁵⁴

37. Further, AEMA claims that MISO fails to provide exemptions from certain transmission charges for Electric Storage Resources if they are participating through MISO's DEAR model.⁵⁵ AEMA argues that this is unfair because the Commission allowed exemptions for Electric Storage Resources under Order No. 841.⁵⁶

38. AEE/SEIA assert that MISO's proposal is not clear about what ancillary services DEARs can provide, except for reserves.⁵⁷ AEE/SEIA state that MISO's proposal contemplates DEARs providing regulation under new definitions of an Hourly Regulation Maximum and Minimum Injection (and Withdrawal) Limit, which apply exclusively to DEARs, but does not explicitly describe how DEARs can provide this service. AEE/SEIA also state that MISO does not explain why an intermittent resource cannot provide a particular ancillary service on its own under its existing Tariff but could potentially do so as part of a DEAR.⁵⁸

39. Several commenters raise concerns related to the IMM oversight of DEARs. Consumers Energy states that using MISO's existing 10 MW threshold for market monitoring is insufficient to protect against market manipulation and double counting risks and thus it should be removed or lowered.⁵⁹ Consumers Energy contends that DERs

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ AEE/SEIA Joint Protest at 14.

⁵⁸ *Id.* at 15.

⁵⁹ Consumers Energy Protest at 14.

are expected to be small, DERAs could form aggregations under 10 MW to avoid market monitoring, and it would be inappropriate to exempt DEARs from market monitoring based on a characteristic within the DERA's control. Likewise, DTE Electric contends that MISO should consider additional safeguards to ensure that affiliated resources are not bypassing the market monitoring provisions through administrative means.⁶⁰ Ameren asserts that, given the newness of DEARs to the MISO markets and concerns about measurement and verification for heterogeneous aggregations, the prudent course of action may be to have some level of IMM oversight regardless of DEAR size.⁶¹ MISO TOs state that, without a maximum size requirement for DEARs, MISO's proposal could create incentives for resources to size smaller than 10 MW to bypass IMM review.⁶² DTE Electric suggests that the *de minimis* capacity threshold for a DEAR be lowered because its minimum capacity requirement of 0.1 MW is lower than the minimum capacity of 1 MW applicable to most models.⁶³ MISO TOs argue that MISO's market monitoring proposal requires more detail as to the recordkeeping requirements for both normal operations and dispute resolution procedures.⁶⁴

40. MISO TOs question whether MISO's proposal to allow the IMM to review EDC conduct for affiliate favoritism or preference is legally permissible or within the Commission's jurisdiction.⁶⁵ DTE Electric contends that enabling the IMM to review the EDC for affiliate favoritism or preference represents a significant increase in the scale and scope of potential IMM reviews and note that the IMM's review will require specialized knowledge and communication between the EDC and the IMM.⁶⁶ In addition, MISO TOs assert that MISO's proposal is silent on whether penalties will be assessed for failure to fulfill load or capacity obligations.⁶⁷

⁶⁰ DTE Electric Protest at 11-12.

⁶¹ Ameren Protest at 8.

⁶² MISO TOs Protest at 12-13.

⁶³ DTE Electric Protest at 11.

⁶⁴ MISO TOs Protest at 11.

⁶⁵ *Id.*

⁶⁶ DTE Electric Protest at 12.

⁶⁷ MISO TOs Protest at 13.

iii. Answers

41. In response to DTE Electric's and Consumers Energy's arguments, MISO proposes adding language to section 63.3 of the Tariff stating that "[w]hen evaluating conduct associated with [DEARs], multiple [DEARs] in electrical proximity and under ownership or control of a common Market Participant or Affiliates may be treated as one for the purposes of determining if the injection capability is greater than 10 MW."⁶⁸ MISO states that the new language will address protestors' concerns by eliminating the ability of certain Market Participants to bypass IMM review through administrative means. MISO requests that its proposal be implemented as revised.

iv. Data Request Response

42. In response to Commission staff's question regarding the ancillary services that DERAs would be permitted to provide in MISO's ancillary service markets under the DEAR participation model, MISO states that DEARs may provide all ancillary services that MISO conducts markets for as long as the DEAR is qualified to provide the service.⁶⁹ In response to Commission staff's question regarding why Energy Efficiency Resources cannot be part of any DER Group, MISO states that Energy Efficiency Resources can participate in MISO's Resource Adequacy construct as currently specified in the Tariff. MISO explains that Energy Efficiency Resources are measured differently from any other type of DER, and DER Groups need to consist of resources that can be measured in a like manner. MISO states that because Energy Efficiency Resources achieve a permanent continuous reduction in electric energy consumption, they are not eligible to participate in the Energy and Operating Reserves Markets. MISO argues that putting DERs into groups and excluding Energy Efficiency Resources from the DER Groups is not a barrier to participation, and Market Participants can still aggregate various DERs into a DEAR.⁷⁰

43. In response to Commission staff's question regarding how DEARs are committed and how MISO's requirement that DEARs self commit comports with MISO's role in sending commitments to the DERAs, MISO states that all DEARs are self-committed under normal conditions, with limited exceptions, such as contingency reserve deployments and emergency declarations which ensures acceptable technical performance and optimization of MISO's market clearing algorithms and mitigates reliability concerns that significant volumes of DEARs would need to be manually

⁶⁸ MISO Answer at 22.

⁶⁹ Data Request Response at 5 (providing table with Tariff references for ancillary service products for DERA Market Participants).

⁷⁰ *Id.* at 5-6.

committed by MISO operators in real time.⁷¹ MISO explains that the dispatch process will economically clear committed resources for energy and ancillary services, and if the DEAR has an Available Commitment Status, MISO may clear off-line supplemental reserve based on economics. MISO states that after day-ahead case approval and posting of real-time commitment, start and stop instructions are sent to DEARs, and they will receive a start instruction for the first hour of the commitment period and a stop instruction at the end of the commitment period.

44. In response to Commission staff's question regarding MISO's self-commitment requirement, and its process of unit commitment and economic dispatch for DERAs, MISO states that its Security Constrained Unit Commitment (SCUC) will respect the commitment status of the resource when determining whether the resource should be on-line. MISO states that the self-commitment of DEARs allows for the DERAs to better manage the constituent DERs within the potentially heterogeneous aggregation, resulting in a more accurate Commitment Status and matching of their resource functionality.

45. In response to Commission staff's question whether the self-commitment requirement would preclude a DERA from providing any service, MISO states that, consistent with MISO's approved Electric Storage Resource design, DEARs will participate in its markets as self-committed resources; moreover, DEARs must always provide a commitment status to participate in MISO's markets.⁷² MISO explains that the short-term reserve design did not create a new process for deploying off-line short-term reserve, and instead leveraged MISO's existing look ahead commitment process which looks for available resources to commit or decommit to meet Energy, Operating Reserve, Ramp Capability, and Short-Term Reserve requirements. MISO states that self-committed resources are not available for MISO to commit or decommit because the Market Participant informs MISO when the resource must run, and the look ahead commitment process does not suggest commitments of any self-committed resource. Additionally, MISO states that a DEAR would not be able to provide short-term reserve when off-line, but it may provide short-term reserve if qualified and on-line.

46. In response to Commission staff's request that MISO identify any Tariff sections that contain the language describing DERA participation in the Planning Resource Auction and the capacity accreditation process, MISO identifies several sections of Module E-1 that it revised.⁷³ In response to Commission staff's request that MISO

⁷¹ *Id.* at 6.

⁷² *Id.* at 8.

⁷³ *Id.* at 9. Specifically, MISO states that it updated the following sections of Module E-1: 68A.8, 69A.1.1, 69A.3.1, 69A.3.1.a, 69A.3.1.d, 69A.3.1.e, 69A.3.1.g, 69A.4.1, and 69A.4.5.

further explain its capacity accreditation process for DERs and DER Groups, including through an example involving a heterogeneous aggregation, MISO states that a DER or DER Group will be accredited based on its resource type (i.e., wind, solar, thermal, etc.) in the same way transmission connected resources are accredited. Further, MISO explains that a DEAR will be accredited based on the sum of the parts by adding together the total accreditation values of the DER or DER Groups that make up the DEAR. MISO explains that, for a hypothetical DEAR made up of 10 MW of wind and 10 MW of solar, the wind portion would currently receive 1.5 MW credit (15% capacity credit) and the solar portion would receive 5 MW credit (50% capacity credit); thus, the overall accreditation of the DEAR would be 6.5 MW.

47. In response to Commission staff's question regarding how MISO will identify a capacity value for a DER if the DER is not one of any corresponding resource types with an accreditation methodology specified in the Tariff, MISO states that it will, in collaboration with stakeholders, either develop a new method, if time permits, or establish a percentage of installed capacity accreditation value for the new class of resources that would be applied as a proxy until a methodology and sufficient performance data have been established to allow the relative capacity value of the new DER to be established under the Tariff and BPMs.⁷⁴

48. In response to Commission staff's question regarding how Energy Efficiency Resources can participate in MISO's Resource Adequacy construct as part of a DEAR, MISO states that Energy Efficiency Resources will be registered as DERs under the DEAR, and the Resource Adequacy process will accredit the DEAR.⁷⁵ MISO adds that the energy efficiency DER is required to follow the rules in section 69A.3.2 and can only qualify as a planning resource for zonal resource credits for each season for up to four planning years immediately following the energy efficiency DER initial qualification. Additionally, MISO explains that Energy Efficiency Resources in a DEAR can qualify to participate in the Resource Adequacy construct in the same manner that Energy Efficiency Resources participate under the current Tariff.

49. In response to Commission staff's question regarding how MISO proposes to apply existing nonperformance penalties to a DEAR in the event it does not perform because an EDC overrides MISO dispatch, MISO states that it did not modify the definition of Manual Redispatch to cover actions taken by the EDC.⁷⁶ MISO asserts that no exemption from performance penalties will be given to DEARs when an EDC

⁷⁴ *Id.* at 10.

⁷⁵ *Id.*

⁷⁶ *Id.* at 56.

overrides MISO dispatch and that all existing nonperformance penalties will apply.⁷⁷ MISO explains that a DEAR participating in the Resource Adequacy construct will need to meet applicable Planning Resource, must offer, and performance requirements in Module E-1 of the Tariff and the Resource Adequacy BPM.

v. Commission Determination

50. We find that MISO's proposal partially complies with the participation eligibility requirements of Order No. 2222. As an initial matter, we find that MISO complies with the requirement of Order No. 2222 that RTOs/ISOs establish distributed energy resource aggregators as a type of Market Participant.⁷⁸ Consistent with this requirement, MISO's proposal establishes a DERA as a type of Market Participant in MISO, eligible to register and enroll a DEAR or DEARs, which represent one or more DERs that participate as a single resource in MISO's markets.⁷⁹ We address the remaining compliance requirements and comments and protests below.

51. We find that MISO partially complies with the requirement in Order No. 2222 to allow distributed energy resource aggregators to register distributed energy resource aggregations under one or more participation models in MISO's Tariff that accommodate the physical and operational characteristics of the distributed energy resource aggregation.⁸⁰ As expressly permitted by Order No. 2222, MISO's proposal includes a new participation model.⁸¹ With the exceptions discussed below, we find that MISO's DEAR participation model satisfies this requirement.

52. We find that MISO's DEAR participation model will allow DERAs to participate in MISO's markets and provide the services that the DEARs are technically capable of providing. For example, DEARs will be able to participate in MISO's energy and

⁷⁷ *Id.* at 57.

⁷⁸ Order No. 2222, 172 FERC ¶ 61,247 at P 130.

⁷⁹ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0).

⁸⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 130.

⁸¹ *Id.* See also *Cal. Indep. Sys. Operator Corp.*, 179 FERC ¶ 61,197, at P 48 (2022) (CAISO Compliance Order); *N.Y. Indep. Sys. Operator, Inc.*, 179 FERC ¶ 61,198, at P 89 (2022) (NYISO Compliance Order).

ancillary services markets by using self-commitment under normal conditions.⁸² MISO explains that its proposal allows DEARs to provide ancillary services that they are qualified to provide, including Regulating Reserve, Spinning Reserve, Supplemental Reserve, Up Ramp Capability, Down Ramp Capability, and On-line Short-term Reserve.⁸³ Finally, DEARs may participate as a capacity resource in MISO's annual Planning Resource Auction.⁸⁴

53. We disagree with AEMA's argument that MISO's proposal requiring self-commitment is a barrier to participation that will potentially reduce the efficiency of DEARs. MISO's proposal requires DEARs to self-commit under normal conditions, which MISO states will ensure optimal performance of MISO's market clearing algorithms and mitigate reliability concerns associated with MISO operators needing to manually commit high volumes of DEARs in real time.⁸⁵ We also find that MISO has explained that self-commitment by DEARs under normal conditions will enable DERAs to better manage the constituent DERs within heterogeneous aggregations, resulting in a more accurate Commitment Status and matching of a DEAR's functionality with its constituent resources.⁸⁶

54. In response to AEMA's comments regarding the applicability of certain transmission charge exemptions afforded to Electric Storage Resources, we find that such exemptions would apply to Electric Storage Resources independent of the participation model under which they choose to participate in MISO's markets, including those participating as part of a DEAR.⁸⁷ Resources in MISO that meet the definition of Electric Storage Resource are not required to participate in the Electric Storage Resource participation model,⁸⁸ and we find that a storage resource that meets the definition of an

⁸² Transmittal at 8; MISO, Proposed Tariff, Module C, § 39.1.2 (Rules for Self-Scheduled Resources) (37.0.0).

⁸³ Data Request Response at 5.

⁸⁴ MISO, Proposed Tariff, Module E-1, § 69A.3.1 (Capacity Resources) (40.0.0).

⁸⁵ Transmittal at 8 (citing Rauch Test. at 13-14).

⁸⁶ Data Request Response at 7.

⁸⁷ MISO, Tariff, Module B, § 34.2 (Determination of Network Customer's Monthly Network Load) (32.0.0); *id.*, Schedule 26-A (Multi-Value Project Usage Rate) (36.0.0); *id.*, attach. MM, Multi-Value Project Charge (MVP Charge) (44.0.0), § 5.a.

⁸⁸ *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,137, at P 204 (2019) ("find[ing] that MISO's proposal to exempt Electric Storage Resources from Multi-Value Project transmission charges applicable to load, regardless of whether the Electric

Electric Storage Resource and participates through a DEAR under the DEAR participation model should qualify for this exemption.⁸⁹

55. We disagree with AEMA that MISO's proposal lacks detail on how DEARs will participate in the Planning Resource Auction. MISO's proposal permits DEARs to participate in its Resource Adequacy construct as Capacity Resources and as Energy Efficiency Resources,⁹⁰ each with a minimum aggregation of 0.1 MW, and, as clarified in its Data Request Response, MISO provides references to the Tariff sections that include language on DERA participation in the Planning Resource Auction.⁹¹ We find that MISO's proposal provides sufficient clarity on its proposed capacity accreditation process for DEARs. MISO proposes to accredit DERs or DER Groups based on their resource type in the same way that transmission-connected resources are accredited, and to accredit each DEAR based on the sum of its parts by adding together the total accreditation values of the DER or DER Groups that make up the DEAR.⁹² MISO states

Storage Resource is dispatched to provide a service, is consistent with Order No. 841"); *id.* P 207 (directing MISO to submit a further compliance filing exempting Electric Storage Resources from transmission charges when dispatched to withdraw energy pursuant to their down ramp capability); *id.* P 102 (noting that MISO explains in its compliance filing that generating resources that meet Order No. 841's definition of Electric Storage Resource, such as pumped-hydro resources, are not required to adopt the Electric Storage Resource participation model).

⁸⁹ MISO, Tariff, Module B, § 34.2 (Determination of Network Customer's Monthly Network Load) (32.0.0).

⁹⁰ Rauch Test. at 11-12 ("Energy Efficiency Resources, whether as part of or as the whole of a DEAR, can participate in MISO's Resource Adequacy construct as currently specified in the Tariff.").

⁹¹ *Id.* at 23-24; Data Request Response at 9 ("MISO has updated following sections of Module E-1 to include language on DERA participation in the PRA: 68A.8, 69A.1.1, 69A.3.1, 69A.3.1.a, 69A.3.1.d, 69A.3.1.e, 69A.3.1.g, 69A.4.1, 69A.4.5.").

⁹² Data Request Response at 9; *see id.* at 10 ("Incoming resources typically fit into an existing resource type or are closely enough aligned to be added to an existing qualification and accreditation methodology in Module E-1 of MISO's Tariff."); *see* MISO Proposed Tariff, Module E-1, § 69A.4.1 (38.0.0), § 69A.4.1.i (Seasonal Accredited Capacity of Capacity Resources) (38.0.0) ("The Seasonal Accredited Capacity for a Capacity Resource that is a Distributed Energy Aggregated Resource will be determined by the Transmission Provider based on the sum of the Seasonal Accredited Capacity values of the underlying Distributed Energy Resources within the aggregation. The Seasonal Accredited Capacity values of the underlying DERs will be determined

that, for any future DERs that do not fit within an existing methodology, it will develop a new method or establish a proxy Installed Capacity accreditation value until there is sufficient performance data and the establishment of a new method under the Tariff and BPMs.⁹³ To the extent that MISO proposes to implement a proxy Installed Capacity accreditation methodology for any DERs that do not fit within an existing accreditation methodology, MISO must submit a filing pursuant to FPA section 205.⁹⁴ In addition, we disagree with MISO TOs' assertion that it is unclear whether DEARs will be assessed penalties for failure to fulfill load or capacity obligations because DEARs will be subject to any existing nonperformance penalties, including those applied to capacity resources.⁹⁵

56. We also disagree with AEE/SEIA's assertion that it is unclear how a DEAR may provide certain services when an individual DER within a DEAR is incapable of providing that same service, or that MISO must explain why an intermittent resource cannot provide a particular ancillary service on its own, but potentially could as part of a DEAR. As MISO explains, DEAR setpoints or dispatch instructions are translated by the DERA to individual DERs within the aggregation.⁹⁶ If one or more of the DERs within a DEAR can satisfy the relevant requirements to provide a service, we find that such DERs should be able to provide those services as part of a DEAR, in accordance with the goal of Order No. 2222 to allow distributed energy resources to provide all services that they are technically capable of providing through aggregation.⁹⁷

57. We also disagree with AEE/SEIA's contention that MISO's proposal is unclear about the ancillary services that DEARs can provide, and that MISO does not explain how DEARs can provide services such as regulation. The MISO Tariff requires qualifying Market Participants to demonstrate their capability to respond to dispatch targets, setpoint instructions, and to comply with all requirements for operating in the

based on their corresponding resource types as set forth in subsections above and in accordance with the BPM for Resource Adequacy.”).

⁹³ Data Request Response at 10.

⁹⁴ 16 U.S.C. § 824d.

⁹⁵ *Id.* at 57 (“All existing nonperformance penalties will apply.”); *see, e.g.*, MISO, Tariff, Module E-1 (Resource Adequacy) (31.0.0).

⁹⁶ Rauch Test. at 6 (MISO “[relies] on a DERA or its delegate to translate DEAR setpoints or dispatch instructions into signals for the individual DERs within the aggregation.”).

⁹⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 130.

MISO region.⁹⁸ Additionally, the Tariff identifies the ancillary services that DEARs will be permitted to provide in MISO's ancillary service markets under the DEAR participation model, such as Regulating Reserve, Spinning Reserve, Up Ramp Capability, Down Ramp Capability, and On-line Short-term Reserve.⁹⁹

58. We also find that, with certain exceptions, MISO's proposed Tariff revisions relating to market power mitigation and IMM review of DEARs comply with Order No. 2222 given that they are necessary "tariff provisions that allow distributed energy resource aggregations to participate directly in RTO/ISO markets."¹⁰⁰ With respect to the proposed Tariff revisions that apply mitigation rules to DEARs generally or to DEARs that are greater than 10 MW,¹⁰¹ we find that MISO proposes to apply its existing

⁹⁸ MISO, Proposed Tariff, Module C, § 38.2.2 (Market Participant Application and Qualifications) (39.0.0).

⁹⁹ Data Request Response at 5 (identifying Tariff sections for available ancillary service products); MISO Proposed Tariff, Module C, §§ 39.2.1A (Product Requirements for Operating Reserve) (44.0.0); *id.*, 39.2.1B (Resource Requirements for Operating Reserve) (44.0.0); *id.*, 39.2.5E (Distributed Energy Aggregated Resource Offer Rules Day-Ahead) (31.0.0); *id.*, 40.2.3 (Product Requirements for Operating Reserve) (40.0.0); *id.*, 40.2.4 (Resource Requirements for Operating Reserve) (43.0.0); *id.*, 40.2.7C (Distributed Energy Aggregated Resource Offer Rules Real-Time) (31.0.0). *See* Rauch Test. at 14-15.

¹⁰⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 129.

¹⁰¹ *See* MISO Proposed Tariff, Module D, § 63.3. (Categories of Conduct that May Warrant Mitigation) (52.0.0) § 63.3.a.i-ii; *id.*, § 64.1.1. (Thresholds for Identifying Physical Withholding) (55.0.0), § 64.1.1.d; *id.*, § 64.1.2. (Thresholds for Identifying Economic Withholding) (51.0.0), § 64.1.2.d; *id.* § 64.1.2 (Reference Levels) (66.0.0), §§ 64.1.4.f.iii, 64.1.4.f.iii.b; § 65.2.2. (Implementation) (46.0.0) ("A Default Offer shall only be imposed on a Generation, Distributed Energy Aggregated Resource or Stored Energy Resource if it is located in a Broad Constrained Area or a Narrow Constrained Area and if there are one or more Binding Transmission Constraints, or binding Post Reserve Deployment Constraints (other than Sub-Regional Power Balance Constraints), or Sub-Regional Power Balance Constraints into the Second Planning Area defining the area"), 65.3.1 (Imposition) (45.0.0) ("This Section 65.3 shall apply to a Distributed Energy Aggregated Resource, Generation or Stored Energy Resource only if it is located in a Broad Constrained Area or a Narrow Constrained Area and if there are one or more Binding Transmission Constraints, or binding Post Reserve Deployment Constraints (other than Sub-Regional Power Balance Constraints), or Sub-Regional Power Balance

performance requirements to DEARs for participation in the energy market, consistent with Order No. 2222. Similarly, we find that MISO's proposal that the IMM review the conduct of EDCs, including for affiliate favoritism, preference, or undue discrimination, represents an extension of the Tariff's existing rules for IMM review and analysis of actions affecting the competitiveness of MISO's markets.¹⁰² We disagree with MISO TOs, who raise concerns that MISO's proposal for IMM review may not be legally permissible or within the Commission's jurisdiction. The Commission has exclusive jurisdiction over the wholesale markets and the criteria for participation in those markets.¹⁰³ The EDC conduct subject to IMM review concerns EDC review of the individual distributed energy resources that comprise a distributed energy resource aggregation registering to participate in the wholesale markets.¹⁰⁴

59. However, we find that certain of MISO's proposed Tariff revisions relating to market power mitigation measures constitute reforms that are outside the scope of this proceeding.¹⁰⁵ Specifically, with respect to uneconomic production, dynamic constrained areas, physical withholding, and reference levels,¹⁰⁶ MISO proposes to revise its existing

Constraints into the Second Planning Area that give rise to locational market power in the area").

¹⁰² *Id.*, § 53.1.h (39.0.0).

¹⁰³ Order No. 2222, 172 FERC ¶ 61,247 at P 57.

¹⁰⁴ *See id.* P 292 (requiring each RTO/ISO to modify its tariff to incorporate a comprehensive and non-discriminatory process for timely review by a distribution utility of the individual distributed energy resources that comprise a distributed energy resource aggregation, which is triggered by initial registration of the distributed energy resource aggregation).

¹⁰⁵ *Id.* PP 362-363 (explaining that "[t]he [Notice of Proposed Rulemaking] did not propose reforms related to" capacity market mitigation policies); *see also PJM Interconnection L.L.C.*, 182 FERC ¶ 61,143, at P 87 (2023) (PJM Compliance Order) (finding that "PJM's proposed tariff revisions relating to capacity market power mitigation of DER Capacity Aggregation Resources containing Component DER directly connected to distribution facilities co-located with retail end-use load do not comply with Order No. 2222 because they constitute reforms to PJM's capacity market mitigation rules, which are outside the scope of this proceeding.").

¹⁰⁶ *See* MISO Proposed Tariff, Module D, §§ 53.1.h (Conditions, Functions or Actions Monitored), 63.3.a.iii (Categories of Conduct that May Warrant Mitigation) (52.0.0), 63.4.1.i (Determination of Narrow Constrained Areas and Dynamic NCAs) (48.0.0), 64.1.1.a, 64.1.1.f (Thresholds for Identifying Physical Withholding) (55.0.0), 64.1.3.a (Thresholds for Identifying Uneconomic Production) (44.0.0), 64.1.4.a

rules by applying a size-based threshold of greater than 10 MW to DEARs for certain conduct that may warrant mitigation that does not currently exist for any other class of resources. Therefore, we reject MISO's proposed revisions to apply a threshold of greater than 10 MW to DEARs under its mitigation rules in sections 63.3.a.iii, 63.4.1.i, 64.1.1.a, 64.1.1.f, 64.1.3.a, 64.1.4.a, 65.2.2.a-c, and 65.3.1.c.¹⁰⁷ Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that removes its proposed Tariff language that applies a threshold of greater than 10 MW to DEARs under its proposed market power mitigation rules in sections 63.3.a.iii, 63.4.1.i, 64.1.1.a, 64.1.1.f, 64.1.3.a, 64.1.4.a, 65.2.2.a-c, and 65.3.1.c of the Tariff. However, given that market power mitigation rules are necessary to allow DEARs to participate directly in MISO's markets,¹⁰⁸ we also require MISO, as part of its compliance filing, to revise its Tariff, as necessary, to apply its existing market mitigation rules to DEARs.

60. Likewise, we note that, in response to protesters' concerns that DEARs could bypass MISO's market monitoring provisions through administrative means, MISO suggests new Tariff language to treat multiple DEARs that are in electrical proximity and under common ownership or affiliates as one, for the purposes of determining if the injection capability of those resources is greater than 10 MW. Because MISO's suggestion constitutes a reform to its existing rules, as discussed above, we decline to direct MISO to adopt this proposed language.¹⁰⁹

(Reference Levels) (66.0.0), 65.2.2.a-c (Implementation) (45.0.0), 65.3.1.c (Imposition) (45.0.0).

¹⁰⁷ See, e.g., *id.*, §§ 65.2.2.b (Implementation) (46.0.0) ("A Default Offer shall only be imposed . . . if a Distributed Energy Aggregated Resources with greater than ten (10) MW of demonstrated injection capability, Generation Resource, including any Stored Energy Resource, Stored Energy Resource – Type II, or Electric Storage Resource is located in a Dynamic Narrow Constrained Area and if there are one or more Binding Transmission Constraints defining the area."), 65.3.1.c (Imposition) (45.0.0) ("This Section 65.3 shall apply . . . to a Distributed Energy Aggregated Resources with greater than ten (10) MW of demonstrated injection capability, Generation Resource, including any Stored Energy Resource, Stored Energy Resource – Type II, or Electric Storage Resource, located in a Dynamic Narrow Constrained Area and if there are one or more Binding Transmission Constraints that give rise to locational market power in the area.").

¹⁰⁸ See *supra* note 97 and accompanying text.

¹⁰⁹ The Commission's focus in this proceeding is compliance with the requirements of Order No. 2222. Our finding here does not preclude MISO from making

b. Types of Technologies

61. To implement section 35.28(g)(12)(ii)(a) of the Commission's regulations, the Commission required that each RTO's/ISO's rules not prohibit any particular type of distributed energy resource technology from participating in distributed energy resource aggregations.¹¹⁰ In addition, to implement section 35.28(g)(12)(ii)(a) of the Commission's regulations, the Commission required each RTO/ISO to revise its tariff to allow different types of distributed energy resource technologies to participate in a single distributed energy resource aggregation (i.e., allow heterogeneous distributed energy resource aggregations).¹¹¹ The Commission explained that requiring that RTOs/ISOs allow heterogeneous aggregations will further enhance competition in RTO/ISO markets by ensuring that complementary resources, including those with different physical and operational characteristics, can meet qualification and performance requirements such as minimum run times, which will help ensure that RTO/ISO markets produce just and reasonable rates.¹¹²

62. With respect to the participation of demand response resources in distributed energy resource aggregations, the Commission stated that the benefits of allowing heterogeneous aggregations outweigh commenters' preferences to limit the types of resources that can participate in aggregations.¹¹³ The Commission stated that the requirements in Order No. 745 would apply to demand response resources participating in heterogeneous aggregations.¹¹⁴

63. In Order No. 2222-B, the Commission stated that only those reductions that meet the definition of demand response in the Commission's regulations and are used to reduce customer load from a validly established baseline pursuant to Order Nos. 745 and 745-A must be compensated consistent with those orders.¹¹⁵ In addition, the Commission clarified that, if an individual distributed energy resource is a behind-the-meter generator,

a filing pursuant to section 205 of the FPA to modify its rules regarding market power mitigation and IMM review of DEARs.

¹¹⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 141.

¹¹¹ *Id.* P 142.

¹¹² *Id.*

¹¹³ *Id.* P 145; *see also* Order No. 2222-A, 174 FERC ¶ 61,197 at P 54.

¹¹⁴ Order No. 2222, 172 FERC ¶ 61,247 at P 145.

¹¹⁵ Order No. 2222-B, 175 FERC ¶ 61,227 at P 42.

it may participate within a distributed energy resource aggregation as a demand response resource or as a different type of distributed energy resource.¹¹⁶ The Commission stated that, if the distributed energy resource participates as demand response, the requirements in Order No. 745 would apply, and the RTOs/ISOs are required to allow that distributed energy resource to aggregate with other types of distributed energy resources in a heterogeneous distributed energy resource aggregation. The Commission stated that, if the behind-the-meter resource participates as another type of distributed energy resource (i.e., not as a demand response resource), the requirements in Order No. 745 would not apply.

i. Filing

64. MISO states that its proposed DEAR participation model allows heterogeneous aggregations and does not limit aggregations to a particular technology.¹¹⁷ MISO explains that each homogeneous aggregation of DERs within a heterogeneous DEAR is defined as a “DER Group” and that these DER Groups will be used for settlements purposes and for measurement and verification.¹¹⁸

ii. Comments/Protests

65. Ameren contends that MISO’s proposal to have each homogeneous aggregation of DERs (a DER Group) aggregated into DEARs and settled at a Commercial Pricing Node (CP Node) presents concerns.¹¹⁹ Ameren states that, under MISO’s proposed participation model, the demand response portion of the meter data reported by the DERA will be settled under existing settlement rules developed for compliance with Order No. 745.¹²⁰ Ameren avers that it is well established that demand response and “active” DERs could be dispatched in ways that would cause the existing baseline methodologies to be invalid. Further, Ameren contends that group dispatch of these resources will achieve a known effect for the CP Node but will have different impacts on distribution grid operations and that these effects are not well understood at this point. As such, Ameren contends, MISO’s proposal may not solve the challenges with measuring and settling both demand response and other DERs behind a single meter.

¹¹⁶ *Id.* P 44.

¹¹⁷ Transmittal at 5.

¹¹⁸ *Id.* at 6.

¹¹⁹ Ameren Protest at 4-5.

¹²⁰ *Id.* at 5.

66. MISO TOs contend that MISO's proposal requires greater clarity on coordination of Demand Response Resources, including how such resources will be classified when participating in the energy and capacity markets.¹²¹ Entergy contends that individual metering of Distributed Demand Response Resources in a heterogeneous DEAR is necessary for the measurement of both the injection and withdrawal assets in the aggregation and that MISO's proposal is inadequate because it lacks such a provision.¹²² Entergy contends that this will add transparency regarding compliance with the Net Benefits Test per Order No. 745.¹²³

iii. Data Request Response

67. In response to Commission staff's question regarding how MISO's proposal will address the measurement and settlement of both Distributed Demand Response Resources and other types of DERs that are located behind a single meter, and whether it requires separate load metering to settle and measure the performance of a DEAR that includes a Distributed Demand Response Resource, MISO states that individual DERs will have their meter data submitted to MISO as part of the DER Group to which they belong.¹²⁴ MISO states that it only receives the DER Group level meter data value, not the individual device level meter data, and the DERA will be responsible for reporting the DER Group level meter data to MISO. MISO explains distributed generation and distributed storage will be directly metered while Distributed Demand Response Resources will use the measurement and verification protocols of Attachment TT (Measurement and Verification Criteria) to determine their load reduction volumes. MISO states that the submitted load values for a demand response type DER Group will be used to determine its baseline and load reduction, which is the same process used for Demand Response Resources in MISO today. MISO states that, by defining Distributed Demand Response Resources separately, MISO can appropriately compensate them and distribute their cost in a manner that meets the obligations of Order No. 745.

68. In response to Commission staff's question regarding MISO's process of load reconstitution applied to DEARs containing Distributed Demand Response Resources, MISO states that, under its proposed participation model, the Distributed Demand Response Resource portion of the meter data reported by the DERA will be settled under

¹²¹ MISO TOs Protest at 13.

¹²² Entergy Protest at 9, 11.

¹²³ *Id.* at 10-11.

¹²⁴ Data Request Response at 12.

existing settlement rules developed for Order No. 745 compliance.¹²⁵ MISO explains that for the provision of economic energy, when the Locational Marginal Price at the DEAR's CP Node is above the Net Benefits Price Threshold, the cost associated with the Distributed Demand Response Resource portion of the DEAR is assigned to the reserve zone(s) that benefited, and when the Locational Marginal Price (LMP) at the DEAR is below that Net Benefits Price Threshold, the cost is borne by the Load Serving Entity (LSE) who has the obligation to serve the load where the DEAR is located. MISO states that it modified Attachment TT of the Tariff by inserting the phrases DEAR, DEARs, DEAR's, and Distributed Demand Response Resources in a DER Group throughout Attachment TT to clarify that the provisions regarding measurement and verification apply to DEARs in addition to Demand Response Resources, Load Modifying Resources, or Emergency Demand Response resources.

iv. Commission Determination

69. We find that MISO's proposal complies with the requirements of Order No. 2222 with respect to types of technologies. We find that MISO complies with the requirement to not prohibit any particular type of distributed energy resource technology from participating in distributed energy resource aggregations.¹²⁶ MISO's proposal includes a technology-neutral definition for DER and thus does not prohibit any type of technology from participating in a DEAR.¹²⁷

70. We also find that MISO complies with the requirement to allow heterogeneous aggregations.¹²⁸ Specifically, we find that MISO's DEAR participation model complies with this directive by allowing both injecting and demand-curtailling resources to aggregate and participate in MISO's markets as a single resource.¹²⁹

¹²⁵ *Id.* at 12-13.

¹²⁶ Order No. 2222, 172 FERC ¶ 61,247 at P 141.

¹²⁷ MISO, Proposed Tariff, Module A, § 1.D (Definitions) (63.0.0).

¹²⁸ Order No. 2222, 172 FERC ¶ 61,247 at P 142.

¹²⁹ MISO Proposed Tariff, Module A, § 1.D, (Definitions) (63.0.0) (defining a DEAR as “[a]n aggregation of Distributed Energy Resource Groups and Energy Efficiency Resources, which are registered as a single Resource for participation in the Energy and Operating Reserve Markets, and/or as a Planning Resource. A DEAR may not have a Capacity smaller than 100kW, may inject energy for sale in the Energy and Operating Reserve Market and withdraw energy for later sale in the Energy and Operating Reserve Market, and may consist of a single Distributed Energy Resource. To be able to participate in the Energy and Operating Reserve Markets, the aggregated

71. We also find that MISO complies with the requirement of Order No. 2222 to apply the requirements of Order No. 745 to demand response resources participating in heterogeneous aggregations.¹³⁰ As MISO explains, under MISO's proposed participation model, the demand response portion of the meter data reported by the DERA will be settled under existing settlement rules developed for Order No. 745 compliance. Under MISO's rules, when the LMP at the DEAR's CP Node is greater than or equal to the Net Benefits Price Threshold, the cost associated with the Distributed Demand Response Resource portion of the DEAR is assigned to the Reserve Zone where the DEAR that reduces demand is located and any other Reserve Zones(s) that benefits, and if the LMP at the DEAR is below the Net Benefits Price Threshold, the cost is borne by the LSE where the DEAR is located.¹³¹ We find that Ameren's contention that demand response and "active" DERs could be dispatched in ways that would cause the existing baselining methodologies to be invalid is broad and unsupported.

72. We disagree with MISO TOs that greater clarity is needed as to the coordination of demand response resources, including how such resources will be classified when participating in the energy and capacity markets. MISO explains that each homogeneous group of DERs, including groups of demand response, within a heterogeneous DEAR is defined as a "DER Group" and is used for settlement purposes and for measurement and verification. Further, MISO defines Distributed Demand Response Resources separately from other resources in a DEAR.¹³²

73. We disagree with Entergy that the Commission should direct MISO to revise the Tariff to require separate load metering for a heterogeneous DEAR that includes a Distributed Demand Response Resource to increase transparency regarding compliance with the Net Benefits Test in Order No. 745. We agree with MISO that, by defining Distributed Demand Response Resources separately from other DERs, and by assigning Distributed Demand Response Resources into DER Groups for settlement purposes and for measurement and verification, MISO can determine the load reduction volumes of

Operable Capacity of the Distributed Energy Resource Groups that comprise the DEAR must be at least 100 kW.").

¹³⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 145.

¹³¹ MISO Tariff, attach. TT (Measurement and Verification (M and V) Criteria) (36.0.0); Data Request Response at 12; MISO Proposed Tariff, Module C, § 40.3.3.1.d (Charges and Credits for Real-Time Energy and Operating Reserve Market Purchases) (42.0.0), §40.3.3.1.d; *see* MISO Tariff, Module C, § 39.3.2C (Charges and Payments for Purchases and Sales for Demand Response Resources) (36.0.0).

¹³² Transmittal at 6; Rauch Test. at 11.

these resources and can appropriately compensate them and distribute their cost in a manner that complies with the requirements of Order No. 745.

c. Double Counting of Services

74. To implement section 35.28(g)(12)(ii)(a) of the Commission's regulations, the Commission in Order No. 2222 allowed RTOs/ISOs to limit the participation of resources in RTO/ISO markets through a distributed energy resource aggregator that are receiving compensation for the same services as part of another program.¹³³ More specifically, the Commission required each RTO/ISO to revise its tariff to: (1) allow distributed energy resources that participate in one or more retail programs to participate in its wholesale markets; (2) allow distributed energy resources to provide multiple wholesale services; and (3) include any appropriate restrictions on the distributed energy resources' participation in RTO/ISO markets through distributed energy resource aggregations, if narrowly designed to avoid counting more than once the services provided by distributed energy resources in RTO/ISO markets.¹³⁴

75. The Commission in Order No. 2222 found that it is appropriate for RTOs/ISOs to place narrowly designed restrictions on the RTO/ISO market participation of distributed energy resources through aggregations, if necessary to prevent double counting of services.¹³⁵ Thus, the Commission found that it is appropriate for RTOs/ISOs to place restrictions on the RTO/ISO market participation of distributed energy resources through aggregations after determining whether a distributed energy resource that is proposing to participate in a distributed energy resource aggregation is (1) registered to provide the same services either individually or as part of another RTO/ISO market participant,¹³⁶ or

¹³³ Order No. 2222, 172 FERC ¶ 61,247 at P 160.

¹³⁴ *Id.*

¹³⁵ *Id.* P 161. For instance, the Commission explained that, if a distributed energy resource is offered into an RTO/ISO market and is not added back to a utility's or other load serving entity's load profile, then that resource will be double counted as both load reduction and a supply resource. Also, the Commission stated that, if a distributed energy resource is registered to provide the same service twice in an RTO/ISO market (e.g., as part of multiple distributed energy resource aggregations, as part of a distributed energy resource aggregation and a standalone demand response resource, and/or a standalone distributed energy resource), then that resource would also be double counted and double compensated if it clears the market as part of both Market Participants. *Id.*

¹³⁶ For example, as part of another distributed energy resource aggregation, a demand response resource, and/or a standalone distributed energy resource. *Id.* P 161 n.414.

(2) included in a retail program to reduce a utility's or other load serving entity's obligations to purchase services from the RTO/ISO market.¹³⁷ The Commission provided RTOs/ISOs with regional flexibility with respect to the restrictions that they propose in their tariffs to minimize market impacts caused by the double counting of services provided by distributed energy resources in RTO/ISO markets.¹³⁸

76. In Order No. 2222-A, the Commission clarified that, when the Commission stated that "if a distributed energy resource is offered into an RTO/ISO market and is not added back to a utility's or other load serving entity's load profile, then that resource will be double counted as both load reduction and a supply resource," the Commission was indicating that, for planning purposes, double counting of services would occur if the same distributed energy resource reduces the amount of a service that an RTO/ISO procures on a forward-looking basis in a certain time period while also acting as a provider of that same service in that same delivery period.¹³⁹ Further, the Commission clarified that, to the extent that an RTO/ISO already has restrictions in place to avoid double counting of services, it is not required to propose new restrictions but rather must explain on compliance how these existing restrictions prevent double counting.¹⁴⁰ Such restrictions would only be appropriate "if necessary to prevent double counting of services,"¹⁴¹ and each RTO/ISO must otherwise "allow distributed energy resources that participate in one or more retail programs to participate in its wholesale markets."¹⁴²

77. In Order No. 2222-B, the Commission clarified that payment of full LMP in the energy market to behind-the-meter distributed energy resources participating as demand response resources in distributed energy resource aggregations does not constitute double counting, so long as the requirements of Order No. 745, including the net benefits test, are satisfied.¹⁴³

¹³⁷ *Id.* P 161.

¹³⁸ *Id.* P 164.

¹³⁹ Order No. 2222-A, 174 FERC ¶ 61,197 at P 63 (quoting Order No. 2222, 172 FERC ¶ 61,247 at P 161).

¹⁴⁰ *Id.* P 64 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 161).

¹⁴¹ *Id.* (quoting Order No. 2222, 172 FERC ¶ 61,247 at P 161).

¹⁴² *Id.* (quoting Order No. 2222, 172 FERC ¶ 61,247 at P 160).

¹⁴³ Order No. 2222-B, 175 FERC ¶ 61,227 at P 43.

i. Filing

78. MISO states that, under its proposed DEAR participation model, the demand response portion of the meter data reported by the DERA will be settled under existing settlement rules in accordance with Order No. 745.¹⁴⁴ MISO asserts that this process addresses double counting by reconstituting load and aligns with its existing tools and processes.

79. MISO also explains that, during the DERA registration process, the EDC or LSE reviews the aggregation to ensure all proposed assets are eligible for the proposed wholesale compensation and are not otherwise compensated for the same wholesale services at retail. MISO states that it will also review the registration for double counting.¹⁴⁵ MISO states that the results and supporting facts of such review are then provided to the RERRA to confirm what is included or excluded in the applicable retail rate. MISO states that the LSE/EDC and RERRA will each have ten days to review the registration, and these reviews will be conducted before the EDC Technical Review. MISO states that while it is working to define asset ownership through multiple entities, the LBA will facilitate identification of the EP Node and impacted parties.¹⁴⁶

ii. Comments/Protests

80. AEE/SEIA contend that giving EDCs and LSEs an unfettered role in reviewing DER participation would allow these entities unbounded discretion to potentially exclude DERs from the marketplace.¹⁴⁷ AEE/SEIA further contend that given the dual participation and double counting review by MISO and RERRAs, there is no need for further duplicative reviews by EDCs and LSEs, especially without RERRA oversight or a clear dispute resolution process. AEE/SEIA argue that if the LSE has double compensation concerns about a DERA, then the LSE should be allowed to contest this information through the registration process to balance the rights of the DERA and the LSE.

81. AEMA contends that MISO's proposal does not sufficiently define double counting of the relevant services and could lead to inequitable treatment in the review

¹⁴⁴ Transmittal at 8.

¹⁴⁵ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (31.0.0); MISO Answer at 16.

¹⁴⁶ Data Request Response at 15-16.

¹⁴⁷ AEE/SEIA Joint Protest at 10-11.

process.¹⁴⁸ AEMA argues that the Commission should direct MISO to clarify the proposed Tariff language to provide more details on how it will address double counting in a narrowly tailored fashion.¹⁴⁹ AEMA emphasizes that MISO fails to provide enough information in the context of net energy metering and interruptible load used cases.¹⁵⁰ AEMA contends that net energy metering is better addressed by RERRA and EDC retail tariffs and thus suggests that MISO use the approach PJM Interconnection, L.L.C. (PJM) takes in its Order No. 2222 compliance filing to allow for net energy metering DER to participate in energy and capacity markets if (1) the EDC can confirm that no double counting is occurring, and (2) PJM determines that the applicable participation requirements can be met.¹⁵¹ Illinois Commission states that it supports MISO's general efforts to allow participation in MISO's markets alongside state net metering programs and to curtail double compensation.¹⁵²

82. MISO TOs assert that MISO inappropriately requires the LBA to be part of the EDC/LSE and LBA eligibility review process to ensure no double counting between retail and wholesale programs.¹⁵³ MISO TOs question the systems to be required to engage in the double counting review, and argue that MISO should explain how double counting disputes between the RERRA and EDC will be resolved. MISO TOs also ask that MISO clarify whether extensions to the proposed 10-business day review period for EDCs are contemplated.

83. Consumers Energy asserts that double counting risks should be mitigated through transparency, clear verification protocols, and market monitoring tools.¹⁵⁴ Consumers Energy contends that settlement and performance information should be readily available to RERRAs and the EDCs for verification to prevent double counting. Consumers

¹⁴⁸ AEMA Protest at 16-17.

¹⁴⁹ *Id.* at 18.

¹⁵⁰ *Id.* at 16-17.

¹⁵¹ *Id.* at 17.

¹⁵² Illinois Commission Comments at 17.

¹⁵³ MISO TOs Protest at 7.

¹⁵⁴ Consumers Energy Protest at 12.

Energy also suggests lowering MISO's use of a 10 MW threshold for DEARs to mitigate double counting concerns.¹⁵⁵

iii. Answer

84. MISO rejects the concerns raised by protesters, stating that, as part of the double counting review, EDCs/LSEs will review the registration of multiple DERs owned by the same end use customer(s) in the same or different DEARs, or as another resource type.¹⁵⁶ MISO further states that the dual compensation review will entail the EDC/LSE checking the registration for enrollments for the same retail services. MISO states that it will provide the EDC/LSE with the information collected at the time of registration so they can perform the check for double counting and dual compensation. MISO notes that it will also review the registration for double counting prior to EDC/LSE review. MISO explains that the results of the EDC/LSE review will be provided to the RERRA, who will confirm if the DER is not participating in a wholesale program and confirm if the DER is not participating in a retail program. MISO states that if the addition or rejection of a DER(s) results in a dispute, those disputes are best handled by the RERRAs, and if unresolved, section 12 of the Tariff allows for resolution of disputes involving the coordination or application of the EDC review process related to DERA registration and enrollment.¹⁵⁷

iv. Data Request Response

85. In response to Commission staff's request regarding MISO's process with respect to how the settlement of Distributed Demand Response complies with the double counting requirements of Order No. 2222, MISO states that because DERA-submitted meter data will be made available to the EDC and LSE, the EDC and LSE will be able to determine if the DEAR was being used for retail purposes while also being used for wholesale.¹⁵⁸

86. In response to Commission staff's question regarding how DERs that participate in one or more retail program(s) are allowed to participate in wholesale markets, MISO states that the EDC/LSE will first review the aggregation to ensure all proposed assets are eligible for the wholesale compensation and are not otherwise compensated for these

¹⁵⁵ *Id.* at 14.

¹⁵⁶ MISO Answer at 17.

¹⁵⁷ *Id.* at 18.

¹⁵⁸ Data Request Response at 13.

same wholesale services at retail.¹⁵⁹ MISO states that this EDC/LSE review outcome will be provided to the RERRA, to confirm what is included or excluded in the applicable retail rate.¹⁶⁰ MISO states that language on double counting from section 38.7(A)(ii) of the Tariff demonstrates compliance with this requirement.

87. In response to Commission staff's question regarding the timeline and scope of double counting review performed by (1) MISO, (2) the EDC/LSE, and (3) the RERRA, MISO explains that the LSEs/EDCs will review the registration of multiple DERs owned by the same end use customer(s) in the same or different DEARs, or as another resource type.¹⁶¹ MISO states that the EDC/LSE dual compensation review will involve checking the registration for enrollments for the same retail services. MISO states that if the EDC/LSE review determines that the DER is already providing the service at retail, MISO will reject the enrollment of the DER from participating at wholesale because it is already providing the same service at retail. MISO states that the RERRA will then review non-retail DERs in the DEAR to confirm such DERs are not participating in a retail program. MISO states that section 38.7A(ii) of the Tariff defines MISO's role in reviewing each registration to avoid the potential for double counting. MISO states that the EDC and the RERRA will each have ten business days to perform the registration review.

88. In response to Commission staff's question regarding the circumstances under which the LSE, as opposed to the EDC, is the entity reviewing the aggregation, MISO explains that the difference in EDC and LSE roles in reviewing aggregations is largely tied to retail choice states, where the retail electric supplier could be different from the distribution system operator.¹⁶² MISO states that the LSE may need to verify locations already enrolled in a Demand Response Resource, Load Modifying Resource, or Emergency Demand Resource, and that in most cases, asset oversight rests with the Market Participant (LSE or Resource Owner) instead of the EDC.

89. In response to Commission staff's question regarding the Tariff sections that define MISO's and the RERRA's roles in this process, MISO states that section 38.7A(ii) of the Tariff describe the LSEs, EDCs, and RERRAs review for double counting and dual

¹⁵⁹ *Id.* at 13-14.

¹⁶⁰ *Id.* at 14.

¹⁶¹ *Id.* at 15.

¹⁶² *Id.*

compensation, and section 12 of the Tariff allows for resolution of disputes involving the EDC review process related to DERA registration and enrollment.¹⁶³

90. In response to Commission staff's question regarding the role of the LBA with respect to double counting, MISO explains that the LBA is involved in MISO's determination of the definition of asset ownership in the commercial model in the registration process and facilitates identification of the EP Node and impacted parties.¹⁶⁴ MISO states that, from an operational perspective, the LBA provides the overall load and generation values within its designated area. MISO explains that an individual DER identified as retail will have the impact accounted for within the summation of total load in the LBA, while an individual DER identified as eligible for wholesale compensation and included in a DEAR would be accounted for within the summation of total generation in the LBA.

91. In response to Commission staff's question regarding how MISO will account for the different services that DERs provide in MISO's markets, MISO states that the DERA will select DERs to aggregate and then approach MISO to register a DEAR.¹⁶⁵ MISO states that based upon the Technical Review and market compatibility check, the DEAR will be able to provide any of the services for which the resource is qualified.¹⁶⁶ MISO states that it will use the applicable offer information to clear the DEAR in the Day-Ahead and Real-Time Markets for energy and ancillary services and settle based on the day-ahead volume and/or real-time meter data supplied for the DER Groups.

92. In response to Commission staff's question regarding how MISO addresses potential double counting with respect to DERs that participate in net energy metering programs, MISO states that these resources will neither be able to provide wholesale energy nor be compensated for energy in MISO markets, in part to avoid double counting.¹⁶⁷ MISO states that the details necessary to implement this requirement will be included in the appropriate BPM, which is currently BPM-026.

¹⁶³ *Id.* at 15-16.

¹⁶⁴ *Id.* at 16.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 17.

¹⁶⁷ *Id.*

v. Data Request Response Protests

93. AEE/SEIA reiterate that MISO's proposal is not narrowly designed as it gives EDCs/LSEs too much discretion to decide what resources can enter the market.¹⁶⁸ AEE/SEIA aver that there are few details in the Tariff regarding the limits to the role of the EDC/LSE, and that although the Tariff states that parameters of this check will be "set forth in the [BPM]," no such manual governing this review exists yet.

94. Public Interest Organizations similarly argue that the Commission should not allow MISO to leave crucial aspects of compliance to later development through the BPMs, such as double counting of DER participation in net energy metering programs.¹⁶⁹ Public Interest Organizations assert that this is particularly concerning because MISO is now largely absent from discussions about outstanding compliance issues to address with stakeholders.¹⁷⁰

vi. Answer to Data Request Response Protests

95. MISO contends that AEE/SEIA's protest fails to recognize that the EDC/LSE reviews are specific, narrowly designed restrictions on RTO/ISO market participation for DERs through aggregations.¹⁷¹ MISO argues that it appropriately relies on the EDCs/LSEs as they have sufficient information to evaluate the DERs' locations and verify if the DERs are providing the same service at retail or as part of another resource. MISO contends that the details of the evaluation process through which this review will be accomplished is appropriately included in MISO's BPMs as they are implementation details while the underlying restrictions are appropriately included in the Tariff. MISO disagrees with Public Interest Organizations' characterizations of its participation in the stakeholder process.¹⁷²

vii. Commission Determination

96. We find that MISO's proposal complies with the double counting requirements of Order No. 2222. We find that MISO has complied with the requirements to allow distributed energy resources that participate in one or more retail programs to participate

¹⁶⁸ AEE/SEIA Joint Data Request Response Protest at 11.

¹⁶⁹ Public Interest Organizations Data Request Response Protest at 7.

¹⁷⁰ *Id.* at 7-8.

¹⁷¹ Answer to Data Request Response Protests at 10.

¹⁷² *Id.* at 12.

in its wholesale markets.¹⁷³ MISO's proposed participation model affords DERs the opportunity to participate simultaneously in one or more retail programs and in MISO's wholesale markets as long as such DERs are eligible, as discussed further below.¹⁷⁴ In addition, we find that MISO's proposal complies with the requirement to allow distributed energy resources to provide multiple wholesale services.¹⁷⁵ MISO's proposal allows DEARs to provide multiple wholesale services, akin to other supply resources.¹⁷⁶

97. We also find that MISO's proposal complies with the Order No. 2222 requirement to include appropriate restrictions on distributed energy resources' participation in RTO/ISO markets through distributed energy resource aggregations, if narrowly designed to avoid counting more than once the services provided by distributed energy resource aggregations in RTO/ISO markets.¹⁷⁷ MISO's proposal in section 38.7A(ii) and (iii) of the Tariff includes several double counting reviews during the registration process that allow MISO to reject the registration of DERs that are already included in a registered resource with MISO or providing the same service at retail. First, MISO will review the registration for double counting.¹⁷⁸ Next, the EDC/LSE will review the DEAR to determine whether any DER is currently registered to provide the same service in the MISO markets as part of an existing resource or enrolled to provide the same service at retail. Thereafter, the outcome of the EDC/LSE review and supporting facts will be

¹⁷³ Order No. 2222, 172 FERC ¶ 61,247 at P 160.

¹⁷⁴ MISO Proposed Tariff, Module A, § 1.D (Definitions) (63.0.0); *id.*, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.ii.

¹⁷⁵ Order No. 2222, 172 FERC ¶ 61,247 at P 160. *See* MISO Proposed Tariff, Module A, § 1.D (Definitions) (63.0.0); *id.*, Module C, § 38.7(A)(ii) (Distributed Energy Resource Aggregators) (32.0.0).

¹⁷⁶ *See, e.g.*, Data Request Response at 5 (identifying all ancillary service products for DERA Market Participants); MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0) § 38.7.A.i (requiring the DERA to provide during registration the anticipated products the DERA is registering the DEAR to provide).

¹⁷⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 160.

¹⁷⁸ Data Request Response at 40; MISO, Proposed Tariff, Module C, § 38.7A(ii) (Distributed Energy Resource Aggregators) (32.0.0) ("If a DERA proposes to register multiple DERs owned by the same end use customer(s) in the same or different DEARs, or as another Resource type, [MISO] shall review each registration to avoid the potential for double counting. Proposed DERs within a DEAR that are already included in a registered resource with [MISO] or providing the same service at retail will be rejected.").

provided to the RERRA to confirm “that the DER is not participating in a retail program that would result in double counting or double compensation if the DER also participates in a wholesale aggregation.”¹⁷⁹ MISO will determine wholesale participation eligibility based on the input of the EDC/LSE and RERRA.¹⁸⁰

98. We disagree with protesters who contend that MISO’s proposal is not narrowly designed and therefore noncompliant with Order No. 2222.¹⁸¹ Rather, we find that MISO’s proposal is narrowly designed because it does not broadly prohibit DERA participation in MISO’s markets unless the DER in the aggregation is providing the same service as an existing resource or in a retail program.¹⁸²

99. We find that MISO’s proposal to rely on the EDC/LSE and RERRA to account for different services provided by a DER in its DEAR registration process is compliant with the Order No. 2222 requirement to properly account for the different services that distributed energy resources provide in the RTO/ISO markets.¹⁸³ We reject arguments that MISO’s proposal gives LSEs and EDCs too much discretion and includes few details on the limits of their role in the Tariff, establishes a redundant role for LSE/EDC review, fails to sufficiently define double counting of services, or should be substituted for an approach that another RTO/ISO has taken. First, we agree with MISO that its proposed Tariff language is clear because the review conducted by LSEs/EDCs concerns whether any DER within an aggregation is currently registered to provide the same service in MISO’s markets as part of an existing resource, or enrolled to provide the same service at retail, consistent with Order No. 2222.¹⁸⁴ Moreover, because MISO includes this double counting restriction in its Tariff, we disagree with Public Interest Organizations that the Tariff must also address double counting of DERs in net metering programs. We agree with MISO that details concerning such programs may be included in the appropriate BPM, which is currently BPM-026, and we encourage MISO to develop such guidance to

¹⁷⁹ Transmittal at 8; MISO Answer at 17; Rauch Test. at 42.

¹⁸⁰ Data Request Response at 15.

¹⁸¹ AEE/SEIA Joint Protest at 11; AEMA Protest at 16-17.

¹⁸² Order No. 2222, 172 FERC ¶ 61,247 at P 161 (finding that it would be appropriate to place restrictions if a distributed energy resource is “registered to provide the same services either individually or as part of another RTO/ISO Market Participant”).

¹⁸³ *Id.* P 160; *see* PJM Compliance Order, 182 FERC ¶ 61,143 at P 139.

¹⁸⁴ Answer to Data Request Response Protests at 10.

provide market participants with additional clarity.¹⁸⁵ Further, we find it appropriate that MISO permits the LSE/EDC to conduct a double counting review in addition to MISO and the RERRA because, as discussed below, MISO proposes this review as a means of establishing, in the Tariff, criteria by which the distribution utilities will determine whether each proposed distributed energy resource is capable of participation in a distributed energy resource aggregation to comply with Order No. 2222.¹⁸⁶ Finally, we note that, in Order No. 2222, the Commission allowed flexibility regarding any proposed double counting restrictions.¹⁸⁷

100. We decline to address at this time MISO TOs' request for clarification concerning double counting disputes because, as discussed below, MISO's dispute resolution proposal partially complies with the requirements of Order No. 2222.¹⁸⁸ In response to MISO TOs' concerns about having only 10 days for the EDC double counting review period, we note that, as discussed below, we direct MISO to revise the Tariff to include all aspects of the distribution utility's review, including its double counting review, in the 60-day distribution utility review period.¹⁸⁹ We disagree with MISO TOs that the LBA is a part of the EDC/LSE and LBA eligibility review process to prevent double counting; as MISO explains, the LBA is involved only in MISO's determination of the definition of asset ownership in the registration process in facilitating the identification of the EP Node and providing the overall load and generation values within its designated area.¹⁹⁰

101. In response to Consumers Energy's request for settlement and performance data for double counting analysis, we note that MISO proposes in section 38.7.D of the Tariff that "[t]he DEAR settlement information can be viewed by the LSE, EDC, and LBA via

¹⁸⁵ Data Request Response at 17; *see* NYISO Compliance Order, 179 FERC ¶ 61,198 at P 139; CAISO Compliance Order, 179 FERC ¶ 61,197 at P 105.

¹⁸⁶ Order No. 2222, 172 FERC ¶ 61,247 at P 292; *see infra* P 293.

¹⁸⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 164; NYISO Compliance Order, 179 FERC ¶ 61,198 at P 137 (noting that Order No. 2222 allows flexibility regarding any proposed restrictions); CAISO Compliance Order, 179 FERC ¶ 61,197 at P 105 (noting same).

¹⁸⁸ *See infra* P 311.

¹⁸⁹ *See* discussion *infra* Part IV.B.7.b.ii.a.6.

¹⁹⁰ Data Request Response at 16 ("If the correct allocation to load or generation is not identified during the registration process and accounted for as part of the LBA data submittals, MISO could inadvertently commit or decommit generation to ensure the balance of load and generation with incorrect data.").

the Market Portal once the Hourly Ex Post LMPs are approved.”¹⁹¹ Lastly, we are not persuaded by Consumers Energy’s argument that lowering the existing 10 MW threshold for IMM review would mitigate double counting concerns. Consumers Energy does not explain how such an adjustment would affect double counting of services.

d. Minimum and Maximum Size of Aggregation

102. In Order No. 2222, the Commission added section 35.28(g)(12)(iii) to the Commission’s regulations to require each RTO/ISO to implement a minimum size requirement not to exceed 100 kW for all distributed energy resource aggregations.¹⁹² The Commission stated that it will consider any future post-implementation requests to increase the minimum size requirement above 100 kW if the RTO/ISO demonstrates that it is experiencing difficulty calculating efficient market results and there is not a viable software solution for improving such calculations.¹⁹³

103. The Commission was not persuaded by commenters to adopt a maximum size requirement for distributed energy resource aggregations that span multiple pricing nodes.¹⁹⁴ The Commission stated that it did not see a need to adopt such a requirement because, to the extent that RTOs/ISOs allow for multi-node distributed energy resource aggregations, distribution factors and bidding parameters should provide the RTOs/ISOs with the information from geographically dispersed resources in a distributed energy resource aggregation necessary to reliably operate their systems regardless of the size of the aggregation.

i. Filing

104. MISO states that, under its proposed participation model, a DEAR must be physically located within MISO and that the aggregated operable capacity of the DER Groups in a DEAR must be at least 100 kW.¹⁹⁵ MISO witness Rauch states that this

¹⁹¹ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators), § 38.7.D (32.0.0); *see* Rauch Test. at 51 (“MISO will make submitted meter data available for LSE and EDC review, including any final review of double counting or compensation.”)

¹⁹² Order No. 2222, 172 FERC ¶ 61,247 at P 171.

¹⁹³ *Id.* P 172.

¹⁹⁴ *Id.* P 174.

¹⁹⁵ Transmittal at 8-9 (citing MISO, Proposed Tariff, Module A, § 1.D (Definitions) (63.0.0)).

minimum operable capacity allows for accurate modeling and dispatch.¹⁹⁶ MISO further explains that Energy Efficiency Resources cannot satisfy the operable capacity requirement given that they are a passive resource used to reduce obligations and cannot be dispatched.¹⁹⁷

105. MISO states that it does not propose a maximum size for DEARs, or for individual DERs within an aggregation.¹⁹⁸ MISO notes that size limitations may arise due to RERRA policies or the physical limitations of the system in the EDC review.

ii. Comments/Protests

106. MISO TOs state that MISO's proposal not to include a maximum size requirement for DEARs is at odds with limitations in the interconnection process and could create incentives for resources to size smaller than 10 MW to bypass Market Monitor review.¹⁹⁹

iii. Data Request Response

107. In the Data Request, Commission staff asked why a homogeneous aggregation of Energy Efficiency Resources would be subject to a 0.1 MW minimum size requirement to provide Resource Adequacy but be unable to satisfy the minimum 0.1 MW operable capacity requirement, if aggregated with other types of DERs, and whether this requirement effectively increases the minimum aggregation size to provide capacity above 0.1 MW for DEARs composed of Energy Efficiency Resources and other DERs. MISO responds that for a DEAR to participate in the energy market it must be at least 100 kW.²⁰⁰ MISO explains that if a DEAR has energy efficiency DERs in the aggregation, the minimum capacity of the DEAR is effectively increased beyond 0.1 MW to participate in the Energy and Operating Reserves Market. MISO notes that the minimum operable capacity allows for accurate modeling and dispatch in MISO's Energy and Operating Reserve Markets. MISO states that, Energy Efficiency Resources cannot satisfy this requirement, given that they are a passive resource used to reduce obligations and cannot be dispatched. MISO adds that the smallest resource granularity in the energy and ancillary service markets is 0.1 MW.

¹⁹⁶ Rauch Test. at 24.

¹⁹⁷ Transmittal at 9 (citing Rauch Test. at 16).

¹⁹⁸ *Id.*

¹⁹⁹ MISO TOs Protest at 12-13.

²⁰⁰ Data Request Response at 11.

iv. Commission Determination

108. We find that MISO's proposal complies with the minimum and maximum size requirements of Order No. 2222.²⁰¹

109. In response to MISO TOs, who express concern with the lack of a proposed maximum size requirement for DEARs, we note that Order No. 2222 did not require RTOs/ISOs to establish a maximum size requirement for distributed energy resource aggregations and that MISO did not propose a maximum size requirement for DEARs.²⁰² Therefore, we find that MISO TOs' concern is outside the scope of this proceeding.

3. Locational Requirements

110. In Order No. 2222, the Commission added section 35.28(g)(12)(ii)(b) to the Commission's regulations to require each RTO/ISO to revise its tariff to establish locational requirements for distributed energy resources to participate in a distributed energy resource aggregation that are as geographically broad as technically feasible.²⁰³ Given the variety of approaches to locational requirements proposed by commenters, the Commission provided each RTO/ISO with flexibility to determine the locational requirements for its region, as long as it demonstrates that those requirements are as geographically broad as technically feasible. To the extent that an RTO/ISO seeks to continue its currently effective locational requirements for distributed energy resources, it must demonstrate that its approach meets this requirement. The Commission stated that each RTO/ISO must provide a detailed, technical explanation for the geographical scope of its proposed locational requirements.²⁰⁴ While each RTO/ISO must provide a detailed, technical explanation for the geographical scope of its proposed locational requirements, the Commission provided RTOs/ISOs with a certain degree of flexibility as to the

²⁰¹ Order No. 2222, 172 FERC ¶ 61,247 at P 171; *see* MISO, Proposed Tariff, Module A, § 1.D (Definitions) (63.0.0); Transmittal at 9; Rauch Test. at 24.

²⁰² Order No. 2222, 172 FERC ¶ 61,247 at PP 171, 174. *See supra* P 58 (discussing MISO's proposal for IMM review of DEARs).

²⁰³ Order No. 2222, 172 FERC ¶ 61,247 at P 204.

²⁰⁴ *Id.* The Commission stated that this explanation could include, for example, a discussion of the RTO's/ISO's system topology and regional congestion patterns, or any other factors that necessitate its proposed locational requirements.

technical aspects of a locational requirement that is as geographically broad as possible.²⁰⁵

a. Filing

111. MISO proposes to limit DEARs to only include resources located physically within the MISO region.²⁰⁶ MISO states that pseudo-tied units are ineligible for participation. MISO asserts that DEARs must be aggregated to a single EP Node for participation within MISO, which, according to MISO, is the broadest and most technically feasible approach to model DEARs. MISO explains that single EP Node aggregation matches the granularity of MISO's dispatch, allowing DEARs to be priced equivalently with other resources participating in MISO's Energy and Operating Reserve Markets. MISO states that aggregation at a single EP Node also provides visibility and operational awareness, ensuring transmission security through market-based congestion management and MISO's Security Constrained Economic Dispatch (SCED).

112. MISO states that it considered alternatives to single EP Node aggregation, such as a market product that combined a single-node aggregation for dispatchable resources with a multi-node approach for resources that must be bulk dispatched or a cluster of EP Nodes to allow for broader aggregation.²⁰⁷ However, according to MISO, those alternatives raised concerns regarding the ability to provide timely and accurate real-time distribution factors, which would require real-time updates on the status of the distribution system to feed into MISO's SCED. MISO explains that inefficiencies in the creation and accuracy of these distribution factors would result in paying units that exacerbate congestion the same as units that relieve a constraint. MISO asserts that anticipated transmission constraint relief dispatch could adversely affect flows over constrained parts of the system and result in the need to dispatch other generation to avoid degraded system reliability. MISO states that its proposed single EP Node aggregation approach is consistent with a joint report authored by MISO and the Stevens Institute of Technology (SIT Study), the findings of which are presented in testimony appended to its filing.²⁰⁸

²⁰⁵ *Id.* P 206.

²⁰⁶ Transmittal at 10.

²⁰⁷ *Id.*

²⁰⁸ *Id.* at 11. *See* Rauch Test. at 21 (citing Future Resource Studies in the MISO System (2020), <https://cdn.misoenergy.org/Future%20Resource%20Studies%20in%20the%20MISO%20System539337.pdf> (SIT Study)).

113. MISO states that, although multi-node aggregations are permitted for Demand Response Resource Type-I, Load Modifying Resources, and Emergency Demand Response, such resources are distinguishable from DEARs.²⁰⁹ MISO explains that: (1) Demand Response Resource Type-I are bulk committed with distribution factors included in the commercial model with no mechanism to update in Day-Ahead or Real-Time Markets, and that MISO works with the LBAs and Market Participants to define distribution factors for quarterly commercial model updates; (2) although multi-node aggregation for Load Modifying Resources is permitted, Load Modifying Resources are not true market resources because they are price takers that are only available for emergencies, their modeling is inconsistent with that required for resources in MISO's Energy and Operating Reserve Markets, and aggregations within a single LSE can lead to scenarios where they are dispatched in a manner that exacerbates congestion; and (3) Emergency Demand Response resources are similar to Load Modifying Resources, except that Emergency Demand Response can provide a monetary offer for deployment and that offer can set market price in the Energy and Operating Reserve Markets.²¹⁰ MISO also states that, while there are limitations associated with single EP Node aggregations, such limitations are outweighed by the benefits to overall market operations and reliability associated with single node aggregation.²¹¹

b. Comments/Protests

114. Entergy and DTE Electric support MISO's proposal to use single EP Nodes for DEAR participation with self-commitment under normal conditions and agree that aggregation at a single EP Node is the broadest and most technically feasible approach to model DEARs in MISO markets.²¹² DTE Electric states that it shares MISO's concerns regarding the large amounts of modeling complexity to implement multi-node aggregation, contending that extending MISO's SCED to the distribution network-level is computationally intensive and requires extensive up-front modeling.²¹³ DTE Electric argues that single EP Node aggregations reduce the integration efforts required for DERA participation and therefore accelerate DERA participation in MISO.

115. However, AEE/SEIA, AEMA, Public Interest Organizations, and Illinois Commission contend that prohibiting multi-node aggregations creates barriers to

²⁰⁹ Transmittal at 10.

²¹⁰ *Id.* at 10-11 (citing Rauch Test. at 19-20).

²¹¹ *Id.* at 11.

²¹² DTE Electric Protest at 5; Entergy Protest at 7.

²¹³ DTE Electric Protest at 5.

participation because aggregators may be unable to form aggregations at a single pricing node to meet the 100 kW minimum size threshold.²¹⁴ AEMA further contends that requiring a single EP Node for DER aggregation will potentially force aggregators to change EP Nodes whenever retail customers change their LSE.²¹⁵ Public Interest Organizations contend there is no question that the Commission's default position favors multi-node aggregations.²¹⁶

116. Public Interest Organizations state that MISO does not provide a detailed technical explanation for why multi-nodal aggregations are not possible, even if limited in scope.²¹⁷ Public Interest Organizations argue that MISO's proposal does not identify regions in which multi-node aggregations could operate without raising congestion or visibility concerns and allow multi-node aggregation across those areas. Public Interest Organizations further argue that MISO has not sufficiently explained why its system is so unique that the problem associated with dynamic distribution factors cannot be solved. AEE/SEIA point out that the SIT Study explains that allowing aggregation across multiple EP Nodes in the market may help improve computational performance by reducing the total number of dispatchable resources in the security-constrained unit commitment optimization model.²¹⁸ In addition, AEMA and Public Interest Organizations argue that MISO's technical explanation for not allowing multi-nodal aggregation is unpersuasive given that MISO allows aggregation at the CP Node level for Demand Response Resource Type 1 resources.²¹⁹

117. AEMA, Public Interest Organizations, and Illinois Commission argue that the approaches taken by PJM, California Independent System Operator Corporation (CAISO), ISO New England Inc. (ISO-NE), and New York Independent System Operator, Inc. (NYISO) provide valuable insights into multi-node aggregations, and the Commission should order MISO to explore and develop options for allowing multi-node

²¹⁴ AEE/SEIA Joint Protest at 6-7; AEMA Protest at 10; Illinois Commission Comments at 8; Public Interest Organizations Protest at 20.

²¹⁵ AEMA Protest at 10-11.

²¹⁶ AEE/SEIA Joint Protest at 9; Public Interest Organizations Protest at 19-20.

²¹⁷ Public Interest Organizations Protest at 18-19.

²¹⁸ AEE/SEIA Joint Protest at 9 (citing SIT Study at 3 ("Integrating large numbers of DER into the market introduces computational challenges. However, a novel algorithmic approach of grouping like EP Nodes could help improve computational performance.")).

²¹⁹ AEMA Protest at 9; Public Interest Organizations Protest at 19.

aggregation.²²⁰ In terms of other alternatives, AEMA states that during the stakeholder process it recommended that MISO allow aggregations of up to 5 MW over multiple EP Nodes within a Local Resource Zone, but MISO did not accept this.²²¹ Public Interest Organizations contend that MISO could allow DERs to aggregate beyond a single node if, and only if, the quantity of DERs at each EP Node is less than 100 kW and such DERs could not otherwise participate in MISO's markets.²²²

c. Answer

118. MISO asserts that its proposed single EP Node aggregation proposal is the broadest and most technically feasible approach to model DEARs and that the Commission should accept it.²²³ MISO states that, while some resource types allow distribution system-based resource participation, these resource types cannot participate in all market products. MISO claims that, to effectively manage congestion on the Transmission System, MISO requires granular visibility regarding the location of each resource and that each resource needs to follow the set point provided by MISO.²²⁴ MISO explains that allowing multi-node aggregations may result in an aggregation that contains EP Nodes that have both positive and negative effects on a transmission constraint, and that if the deployment of a distributed set of DERs is inconsistent with the EP Node distribution factors assumed in the MISO dispatch algorithms, MISO may not achieve the relief requested and may even see price and flow oscillations.

119. MISO states that it conducted interviews with EDCs and DERAs that highlighted the challenges to maintaining accurate distribution factors in real time given the ability of DERAs to use different DERs within a given DEAR to meet dispatch targets, and the dynamic nature of the distribution system topology.²²⁵ MISO states that the existing resource models supporting multi-nodal aggregation (i.e., Demand Response Resource Type I, Load Modifying Resource, and Emergency Demand Response Resource) do so in a single LSE within a single Local Balancing Authority Area. Further, MISO explains that these resource types are distinguishable from a DEAR because they operate in a

²²⁰ AEMA Protest at 11-12; Illinois Commission Comments at 8; Public Interest Organizations Protest at 19-20.

²²¹ AEMA Protest at 10.

²²² Public Interest Organizations Protest at 21.

²²³ MISO Answer at 8, 10.

²²⁴ *Id.* at 9.

²²⁵ *Id.*

block manner and cannot be dispatched from interval to interval in real time.²²⁶ MISO also asserts that it is not removing the option to use these existing resource models; rather, it is creating an additional DEAR option that can provide all market products.

120. MISO also states that, in 2020, it considered approaches to managing multi-node aggregations, including the possibility of grouping EP Nodes with similar sensitivities to transmission constraints.²²⁷ MISO states that due to the highly interconnected nature of the MISO Transmission System, the analysis identified 2,880 clusters using a similarity threshold of 1-3%.²²⁸ MISO explains that the clusters identified were different for different day-ahead cases and varied depending on the constraints that were modeled and binding, causing implementation to be so complex as to be infeasible. Additionally, MISO states that it determined that implementing multi-node aggregation would require significant new capabilities, including a move from the current quarterly model updates to daily updates. MISO notes that failure to accurately model the location of energy can lead to avoidable transmission constraints, broad oscillation of energy dispatch from interval to interval, and other reliability concerns.²²⁹ MISO states that while the impacts of a small volume of DEAR arguably may be mitigated, MISO did not design DEARs to be constrained to a small volume of participants and that forecasting accurate transmission constraint flows while supporting a large volume of DEARs requires EP Node level aggregation.

d. Data Request Response

121. In response to Commission staff's request regarding whether MISO has analyzed areas where a subset of nodes that have approximately similar impact on congested paths can be grouped into a single broader node and whether it is necessary to know the distribution factor within the subset, MISO states that the SIT Study found that under multi-EP Node aggregations, LMP and/or transmission flow oscillation may not be avoidable due to inefficiencies in knowing the elasticity and locational response of DERs as they are not precisely known in grid operators' unit commitment and economic

²²⁶ *Id.* at 10.

²²⁷ *Id.*

²²⁸ See SIT Study at 12-13 (defining a similarity threshold mathematically). The SIT Study uses a similarity index to assess the similar or different effects of incremental power injection at two different nodes on a monitored constraint. The similarity threshold screens out similarity index values that are less than or equal to the similarity threshold in order to identify nodes that are broadly similar.

²²⁹ MISO Answer at 11.

dispatch models.²³⁰ MISO further states that the SIT Study indicated that integrating large numbers of DERs into the market introduces computational challenges for market clearing. MISO contends that even small deviations in DER aggregation distribution factors in Day-Ahead and Real-Time Markets could negatively impact day-ahead and real-time price convergence and market efficiency, and lead to market gaming and capacity withholding concerns.

122. MISO adds that, unlike CAISO, which allows multi-node aggregation in a single sub-Load Aggregation Point as long as the Distributed Energy Resource Aggregation is 20 MW or less, MISO may see over 20 different transmission constraints binding during an operating day.²³¹ MISO contends that determining a zone or area that can have a similar impact on the system under all possible network and system conditions is challenging and, at times, impossible. MISO states that this resultant area may not be big enough to effectively aggregate multi-node DERs, or may not be superior to a simple EP Node aggregation, and therefore could limit MISO's ability to manage markets and maintain system reliability.

123. MISO contends that accurate information about a DER aggregation's distribution factors is critical to manage system congestion effectively.²³² MISO argues that the numerous technical challenges associated with accurately determining multi-node DER aggregation's distribution factors can be overcome efficiently with a single EP Node aggregation as there are no distribution factors. MISO further states that the quarterly updates to its commercial and network model for multi-node DER aggregation would be challenging and a significant burden on MISO, and also impact its ability to determine system losses, leading to inaccurate energy and subsequently ancillary service product pricing, which could have a significant impact on overall MISO markets.

124. In response to Commission staff's request regarding whether MISO believes the single node requirement is necessary to ensure reliable operations of the Bulk Electric System and to meet any specific reliability standards, MISO states that under a single EP Node aggregation DEARs will be modeled with a consistent location of injection, and the impacts of changes in their flow will be calculated consistently with other resources that participate in MISO's markets.²³³ MISO further states that a single EP Node aggregation will limit adverse impacts to congestion as in the case of both Demand Response Resource Type I and Load Modifying Resource deployments, where aggregated shift

²³⁰ Data Request Response at 19-20.

²³¹ *Id.* at 20.

²³² *Id.* at 20-21.

²³³ *Id.* at 21.

factors dilute or do not represent the impact of deploying Demand Response Resources or Load Modifying Resources on specific transmission constraints.

125. MISO contends that allowing multi-node aggregations may result in the deployment of a distributed set of DERs whose distribution factors are inconsistent with those assumed in the MISO dispatch algorithms, which may result in price and flow oscillations.²³⁴ MISO states that such small errors across multiple resources could result in a material impact, potentially affecting its ability to maintain compliance with R1, R2, R3, and R4 of IRO-009-1 and R1, R12, and R14 of TOP-001-5 NERC mandatory Reliability Standards.

e. Data Request Response Protests

126. AEE/SEIA argue that MISO has not justified limiting DER aggregations to a single node.²³⁵ AEE/SEIA contend that while the SIT Study examined the possible integration of distributed resources, it is unclear from the report what conditions the study modeled.²³⁶ For instance, AEE/SEIA state that under MISO's proposal, DEARs will participate in the market using self-commitment under normal conditions; however, the SIT Study does not state whether it modeled self-commitment of DERs. AEE/SEIA also state that it is unclear from the model what level of DER penetration was studied, and at what nodes. AEE/SEIA assert that it is also unclear how the MISO system in 2030 was modeled, and that without such information, it is impossible to gauge the likelihood or severity of the concerns MISO raises. AEE/SEIA also argue that the issue of transmission constraints appears to be similar between MISO and CAISO, yet CAISO determined a way to measure DERs across nodes in light of these constraints.²³⁷

127. AEMA argues that MISO failed to provide a reasonable explanation for the single node aggregation requirement, and that there is no evidence that MISO studied small groups of multi-node aggregations to find a workable solution.²³⁸ AEMA asserts that the SIT Study did not address the specific question of whether MISO has analyzed areas where a subset of nodes that have approximately similar impact on congested paths can

²³⁴ *Id.* at 22.

²³⁵ AEE/SEIA Joint Data Request Response Protest at 6.

²³⁶ *Id.* at 7.

²³⁷ *Id.* at 8.

²³⁸ AEMA Data Request Response Comments at 4-5.

be grouped into a single broader node.²³⁹ According to AEMA, it is not clear whether MISO has examined the capability of the future operating systems that will be installed with the Market System Enhancement (MSE) project to handle DER participation.²⁴⁰ AEMA also asserts that MISO proposes the simplest and easiest solution to implement without using parameters suggested by the Commission such as maximum capacity limits and distribution factors. AEMA contends that the economics of integrating at a multi-node level should be left to the DERA.²⁴¹ AEMA states that creating restrictions that do not accommodate the capability of DER aggregations is an unnecessary barrier to participation. AEMA argues that there is no reason that a DEAR that is providing similar market services as a Demand Response Resource Type I should not be able to participate in the same way and aggregate DERs across multiple nodes.

128. Public Interest Organizations contend that MISO does not make any attempt to weigh the costs of operational challenges against the benefits of multi-node aggregation, and that the Commission should not allow MISO to effectively exclude large portions of residential DERs without weighing the costs and benefits of such exclusion.²⁴² Public Interest Organizations assert that the mere fact that multi-node aggregations might bring some additional risks does not resolve the question of whether those risks are of such concern as to continue the operation of unjust and unreasonable markets.²⁴³ Furthermore, according to Public Interest Organizations, neither does the existence of added risk necessarily outweigh the added reliability and market benefits that come from bringing more DERs to MISO's system.

f. Answer to Data Request Response Protests

129. MISO contends that none of protesters' concerns justify moving away from the proposed single EP Node approach.²⁴⁴ In response to Public Interest Organizations, MISO notes that as the penetration of storage, electric thermostats, and electric vehicles increases, the ability to reach the minimum 100 kW size will increase, facilitating the

²³⁹ *Id.* at 5.

²⁴⁰ The MSE Project includes the replacement of MISO's legacy systems and software with the integration of new market engines into MISO's systems. Transmittal at 33.

²⁴¹ AEMA Data Request Response Comments at 6.

²⁴² Public Interest Organizations Data Request Response Protest at 5-6.

²⁴³ *Id.* at 6.

²⁴⁴ Answer to Data Request Response Protests at 6.

potential for greater participation in the MISO markets. Therefore, MISO states that residential resources are not effectively barred and will, instead, likely increase at greater thresholds due to their ability to aggregate.

130. In response to AEE/SEIA, MISO claims that it faces technical challenges such as power flow oscillations, distribution factor calculation, and transmission security.²⁴⁵ MISO explains that, contrary to the suggestion that MISO is similar to CAISO in transmission constraints, MISO has had 1,044 unique transmission constraints bind in its real-time SCED from January 1, 2022, through November 8, 2022. MISO states that if DERs are deployed inconsistently with the supplied distribution factors, power flow oscillations or constraint exceedances may occur.²⁴⁶ According to MISO, to effectively calculate the distribution factor, the aggregator needs to know the impedance of the distribution system from the locations of the DERs to the transmission/distribution interface. MISO asserts that it needs to accurately model all injections and withdrawals at the transmission/distribution interface to effectively manage congestion on the transmission system. Therefore, MISO states that any claim that MISO can simply adopt CAISO's approach fails to consider the features of the MISO market and region.

131. MISO states that protesters overlook the three existing resource models that currently allow for multi-node aggregation: (1) Demand Response Resource Type I; (2) Load Modifying Resource; and (3) Emergency Demand Response.²⁴⁷ MISO explains that resources that meet the requirements may register as a Demand Response Resource Type I to participate in the Day-Ahead and Real-Time Markets, and that the Load Modifying Resource and Emergency Demand Response resource models are available for the Planning Resource Auction.²⁴⁸ MISO also states that the Demand Response Resource Type I model does not meet the intent of Order No. 2222 because it can provide Energy or Contingency Reserve or Short-Term Reserve by interrupting supply for a specific period of time. MISO contends that it also offers a single node Demand Response Resource Type II model, which can provide all products in the Day-Ahead and Real-Time Markets. According to MISO, there is no need to offer an interim resource model because the existing options should allow participation until the DEAR model is available.

²⁴⁵ *Id.* at 7.

²⁴⁶ *Id.*

²⁴⁷ *Id.* at 7-8.

²⁴⁸ *Id.* at 8.

132. MISO argues that AEE/SEIA's critique of the SIT Study similarly lacks merit, and that the SIT Study used registered Load Modifying Resources to represent DERs.²⁴⁹ MISO states that it had approximately 11,000 MW of Load Modifying Resources that were modeled as individual dispatchable demand at 14,397 EP Nodes.

g. Commission Determination

133. We find that MISO has not demonstrated that it complies with the locational requirements of Order No. 2222. Specifically, we find that MISO has not demonstrated that its proposed locational requirements for distributed energy resources to participate in a distributed energy resource aggregation are as geographically broad as technically feasible, as Order No. 2222 requires.²⁵⁰ As discussed below, we acknowledge MISO's concerns regarding the use of distribution factors, the challenges of determining a zone or area that can have a similar effect on a network, and operational or congestion management challenges that could arise in the event DERs are aggregated at nodes on the opposing sides of a transmission constraint. However, as discussed below, we find that MISO has not demonstrated that it is not technically feasible for DERs to aggregate across a broader geographic area than a single node, at least for some nodes or groupings of electrical facilities that have similar impacts on the same transmission constraints.

134. MISO asserts that its proposed requirement for DEARs to participate at a single node, rather than across multiple nodes, is based on MISO's unique system topology, congestion patterns, and operating practices.²⁵¹ We acknowledge that it may not be feasible for DERs to aggregate across certain nodes where such nodes are on the opposing sides of the same constraint.²⁵² We understand MISO's concern that allowing DERs to aggregate across such nodes could raise operational challenges. However, we

²⁴⁹ *Id.*

²⁵⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 204.

²⁵¹ Transmittal at 10; MISO Answer at 8-10; Data Request Response at 19-21.

²⁵² Data Request Response at 20 (explaining that there are over 20 different transmission constraints binding during any given operating day as a result of outages, derates, and contingencies on the system); *id.* at 21-22 ("Allowing multi-node aggregations may result in an aggregation that contains [EP Nodes] that have both positive and negative impacts on a transmission constraint."). MISO includes an example in Figure 1, which shows two EP Nodes on opposing sides of a transmission constraint and that aggregation of these nodes can result in a reliability violation when there is error in the distribution factor for each node. *Id.* at 22-23; *see also* Transmittal at 10 (noting that inefficiencies in the creation and accuracy of distribution factors could allow units that negatively impact congestion to be paid equally to units that relieve a constraint).

find that, while MISO has provided its assessment that allowing DERs to aggregate across such nodes could raise operational or reliability challenges or concerns, MISO has not demonstrated that it is not technically feasible for DERs to aggregate across a broader geographic area than a single node, at least for some nodes or groupings of electrical facilities that have similar effects on the same transmission constraints. As commenters note, MISO does not explain whether broader aggregation could be technically feasible for DEARs, for example, by identifying, prior to implementation, transmission constraints or examining regions or areas with historically minimal congestion.²⁵³

135. We also recognize MISO's concerns about DERAs' ability to provide timely and accurate real-time distribution factors; we acknowledge that the SIT Study does indicate that if there is grouping error, i.e., the difference between the shift factor vectors of EP Nodes, when more broadly aggregating DERs, then the grouping error could compromise solution quality.²⁵⁴ However, the SIT Study also appears to suggest that broader aggregation is technically feasible and could be beneficial, in contrast to MISO's claims. For example, the study indicates that the error in the average flow drops from just over 10% to less than 1.2% as the similarity threshold is reduced from 0.03 to 0.01. This suggests that there may be a similarity threshold value that would produce real-time distribution factors that MISO could rely upon with a high level of confidence to manage real-time congestion, if MISO were to group nodes with similar impacts on the same transmission constraints.²⁵⁵ Moreover, with respect to aggregation over a subset of nodes, the SIT Study notes that a grouping method that would aggregate EP Nodes into a group that share similar impacts on transmission constraints could improve, rather than degrade, computational efficiency.²⁵⁶ Thus, we find that MISO has not demonstrated that

²⁵³ See, e.g., AEE/SEIA Joint Protest at 9, AEMA Protest at 9-12, Public Interest Organizations Protest at 19-20.

²⁵⁴ See SIT Study at 26.

²⁵⁵ See Data Request Response at 19-22; SIT Study at 12-13 (defining similarity threshold mathematically). We note that Table 7 shows that the average transmission flow error for the monitored transmission elements significantly improves as the similarity threshold is decreased from 0.03 to 0.01. SIT Study at 18 (Table 7 (average flow deviation with different similarity thresholds)). However, Table 7 of the SIT Study does not analyze transmission flow error in the context of a similarity threshold lower than 0.01, which could improve transmission flow error further.

²⁵⁶ SIT Study at 3-4 ("Integrating large numbers of DER into the market introduces computational challenges. However, a novel algorithmic approach of grouping like [EP Nodes] could help improve computational performance."); see *id.* at 12, 15.

it is not technically feasible to accommodate broader alternatives to single EP Node aggregation while still avoiding concerns with ensuring timely and accurate distribution factors.

136. Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing to either: (1) provide a detailed technical explanation as required by Order No. 2222 to demonstrate that it is not technically feasible for DERs to aggregate more broadly than a single-node, as proposed;²⁵⁷ or (2) propose alternative locational requirements that are as geographically broad as technically feasible, as well as a detailed technical explanation for the geographical scope of these alternative locational requirements.²⁵⁸ We also note that, if MISO elects to propose alternative locational requirements and believes that such locational requirements necessitate changes to other aspects of its Order No. 2222 compliance filing, MISO may propose such changes in its further compliance filing.²⁵⁹

4. Distribution Factors and Bidding Parameters

137. In Order No. 2222, the Commission added section 35.28(g)(12)(ii)(c) to the Commission's regulations to require each RTO/ISO to establish market rules that address distribution factors and bidding parameters for distributed energy resource aggregations.²⁶⁰ Specifically, the Commission required each RTO/ISO that allows multi-node aggregations to revise its tariff to (1) require that distributed energy resource aggregators give to the RTO/ISO the total distributed energy resource aggregation response that would be provided from each pricing node, where applicable, when they

²⁵⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 204.

²⁵⁸ We note that several RTOs/ISOs have adopted geographically broader locational requirements for distributed energy resource aggregations. *See* NYISO Compliance Order, 179 FERC ¶ 61,198 at PP 141, 152; CAISO Compliance Order, 179 FERC ¶ 61,197 at PP 132, 137-139; *ISO New England Inc.*, 182 FERC ¶ 61,137, at P 16 & n.20 (2023) (ISO-NE Compliance Order).

²⁵⁹ We note that implementation of such proposed alternative locational requirements should not further delay implementation of MISO's Order No. 2222 participation model. *See* PJM Compliance Order, 182 FERC ¶ 61,143 at PP 185-186 (finding that if PJM elected to propose alternative locational requirements in its further Order No. 2222 compliance filing, it should implement its PJM Order No. 2222 participation model as of its proposed implementation date, and, if necessary, file a further compliance filing proposing a reasonable effective date for its alternative locational requirements).

²⁶⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 225.

initially register their aggregation, and to update these distribution factors if they change; and (2) incorporate appropriate bidding parameters into its participation models as necessary to account for the physical and operational characteristics of distributed energy resource aggregations.

138. The Commission stated that, in meeting the requirement to incorporate appropriate bidding parameters into its participation models as necessary to account for the physical and operational characteristics of distributed energy resource aggregations, each RTO/ISO must either (1) incorporate appropriate bidding parameters that account for the physical and operational characteristics of distributed energy resource aggregations into its one or more new participation models for such aggregations; and/or (2) adjust the bidding parameters of the existing participation models to account for the physical and operational characteristics of distributed energy resource aggregations.²⁶¹ The Commission noted that bidding parameters could include, for example, response rates, ramp rates, and upper and lower operating limits.²⁶²

139. The Commission stated that, in meeting the requirement to account for distribution factors and bidding parameters, each RTO/ISO may revise its tariff to manage the locational attributes of distributed energy resource aggregations in a manner that reflects the RTO's/ISO's unique network configuration, infrastructure, and existing operational processes.²⁶³ The Commission stated that it would evaluate each RTO's/ISO's proposal to ensure that it will provide the RTO/ISO with sufficient information from resources in a multi-node distributed energy resource aggregation that is necessary to reliably operate its systems without imposing undue burden on individual distributed energy resources or utility distribution companies. The Commission stated that RTOs/ISOs that allow multi-node aggregations must, at a minimum, propose clear protocols explaining how a distributed energy resource aggregation can provide the required information and update that information when needed.

a. Filing

140. MISO explains that a DEAR will share many of the same bidding parameters as other Resources, such as offer price curves and commitment parameters.²⁶⁴ MISO proposes the following new bidding parameters specific to DEARs: Hourly Economic Minimum and Maximum Injection Limits, Hourly Economic Minimum and Maximum

²⁶¹ *Id.* P 227.

²⁶² *Id.* P 225 n.558.

²⁶³ *Id.* P 229.

²⁶⁴ Transmittal at 11.

Withdrawal Limits, Hourly Emergency Minimum and Maximum Injection and Withdrawal Limits, Hourly Injection and Withdrawal Ramp Rates, Hourly Regulation Minimum and Maximum Withdrawal Limits, and Hourly Regulation Minimum and Maximum Injection Limits.²⁶⁵ MISO states that, under its proposed DEAR participation model, a DEAR offer will contain its dispatch status for energy, operating reserves and ancillary services, which will describe eligibility and desired economic treatment of the DEAR in the market dispatch algorithms. MISO also states that a DEAR offer may describe the dispatchable range of operations consistent with its On-Line Commitment Status. MISO explains that there is no need for a requirement for the DERA to provide MISO with distribution factors as part of the DERA's bidding parameters because DEAR market participation is limited to a single EP Node.

b. Comment/Protest

141. Regarding MISO's Tariff definitions for its proposed bidding parameters, Ameren states that 15 definitions focus on hourly requirements and include the phrase "may be submitted to override the default value during the asset registration process."²⁶⁶ Ameren argues that it is problematic for such definitions to allow the DERA to override the value established in the registration process because system effects were studied for that value.²⁶⁷ Ameren contends that MISO has not adequately justified the need for DERAs to override the value established during the registration process or explained how overriding such value does not create reliability or other issues.

c. Commission Determination

142. We find that MISO's proposal partially complies with the requirement of Order No. 2222 to establish market rules that address distribution factors and bidding parameters for distributed energy resource aggregations.²⁶⁸

143. As an initial matter, we are not able to evaluate at this time whether MISO's proposal to not require distribution factors complies with the requirement of Order No. 2222 to establish market rules that address distribution factors for distributed energy resource aggregations.²⁶⁹ MISO states that the single-node framework that it proposes for

²⁶⁵ MISO, Proposed Tariff, Module A, § 1.H (Definitions) (57.0.0).

²⁶⁶ Ameren Protest at 8 (quoting Transmittal at 41-44).

²⁶⁷ *Id.*

²⁶⁸ Order No. 2222, 172 FERC ¶ 61,247 at P 225.

²⁶⁹ *Id.*

energy market participation will not require distribution factors.²⁷⁰ As discussed above in Part IV.B.3 of this order, we find that MISO has not demonstrated that its proposed locational requirements for DEARs are as geographically broad as technically feasible.²⁷¹ Because the need for distribution factors is closely tied to an RTO's/ISO's locational requirements, we find that it is necessary to assess MISO's compliance proposal with respect to distribution factors concurrently with its further compliance filing regarding its proposed locational requirements. Accordingly, to the extent that MISO proposes alternative locational requirements that necessitate the use of distribution factors, we direct MISO to also address this Order No. 2222 requirement in the further compliance filing. Specifically, we require MISO to revise the Tariff as needed to require that a DERA give to MISO the total DEAR response that would be provided from each pricing node, where applicable, when they initially register their aggregation, and to update these distribution factors if the distribution factors change.²⁷² Likewise, to the extent that MISO proposes alternative locational requirements allowing multi-node aggregations, we direct MISO to propose in the further compliance filing clear protocols explaining how a distributed energy resource aggregation can provide the required information and update that information when needed.²⁷³

144. In addition, we find that MISO's proposal complies with the requirement to incorporate appropriate bidding parameters into its participation models as necessary to account for the physical and operational characteristics of distributed energy resource aggregations.²⁷⁴ MISO proposes bidding parameters for DEARs, some of which are similar to existing bidding parameters used by other resources that are capable of interconnecting to the distribution system, such as Electric Storage Resources,²⁷⁵ and we

²⁷⁰ Transmittal at 11.

²⁷¹ See discussion *supra* Part IV.B.3.g.

²⁷² Order No. 2222, 172 FERC ¶ 61,247 at P 225.

²⁷³ *Id.* P 229.

²⁷⁴ *Id.* P 227.

²⁷⁵ See, e.g., MISO, Proposed Tariff, Module A, § 1.H (Definitions) (63.0.0) (defining Hourly Economic Minimum Limit as “[t]he minimum MW level at which a Generation Resource or Demand Response Resource Type II, Stored Energy Resource – Type II, or External Asynchronous Resource may operate under normal system conditions that may be submitted to override the default value submitted during the asset registration process”); *id.* (defining Hourly Economic Maximum Charge Limit as “[t]he maximum withdrawal MW level at which an Electric Storage Resource may operate under normal system conditions that may be submitted to override the default value submitted during the asset registration process”); *id.* (defining Hourly Charge Ramp Rate

find that they account for the physical and operational characteristics of distributed energy resource aggregations.²⁷⁶

145. Finally, we are not persuaded by Ameren's argument that MISO's definitions for its proposed bidding parameters may present a reliability risk by including language permitting the DERA to submit a value different from the default value submitted during the registration process. The proposed bidding parameters provide minimum and maximum limits, such that the DERA may submit a value within that range that may differ from the default value used during normal conditions. Moreover, existing bidding parameters in the Tariff include the same language and have not been shown to negatively affect reliability.²⁷⁷

5. Information and Data Requirements

146. In Order No. 2222, the Commission added section 35.28(g)(12)(ii)(d) to the Commission's regulations to require each RTO/ISO to establish market rules that address information requirements and data requirements for distributed energy resource aggregations.²⁷⁸ As discussed in more detail below, the Commission required each RTO/ISO to revise its tariff to (1) include any requirements for distributed energy resource aggregators that establish the information and data that a distributed energy resource aggregator must provide about the physical and operational characteristics of its aggregation; (2) require distributed energy resource aggregators to provide a list of the

as "[t]he MW/minute response rate for an Electric Storage Resource moving from zero output to its Hourly Economic Minimum Charge Limit and/or from the Hourly Economic Minimum Charge Limit to zero output that is utilized in the clearing of the Day-Ahead Energy and Operating Reserve Market and all Reliability Assessment Commitment processes, and in responding to either increasing or decreasing Setpoint Instructions between zero and the Hourly Economic Minimum Charge Limit that may be submitted to override the default value submitted during the asset registration process."); *see id.* (defining Hourly Economic Minimum Charge Limit, Hourly Economic Minimum Discharge Limit, and Hourly Discharge Ramp Rate).

²⁷⁶ MISO, Proposed Tariff, Module A, § 1.H (Definitions) (63.0.0). Bidding parameters specific to DEARs include: Hourly Economic Minimum and Maximum Injection Limits, Hourly Economic Minimum and Maximum Withdrawal Limits, Hourly Emergency Minimum and Maximum Injection and Withdrawal Limits, Hourly Injection and Withdrawal Ramp Rates, Hourly Regulation Minimum and Maximum Withdrawal Limits, and Hourly Regulation Minimum and Maximum Injection Limits.

²⁷⁷ *See supra* P 140.

²⁷⁸ Order No. 2222, 172 FERC ¶ 61,247 at P 236.

individual resources in their aggregations; and (3) establish any necessary information that must be submitted for the individual distributed energy resources. The Commission also required each RTO/ISO to revise its tariff to require distributed energy resource aggregators to provide aggregate settlement data for the distributed energy resource aggregation and to retain performance data for individual distributed energy resources in a distributed energy resource aggregation for auditing purposes.

147. First, the Commission required each RTO/ISO to revise its tariff to include any requirements for distributed energy resource aggregators that establish the information and data that a distributed energy resource aggregator must provide about the physical and operational characteristics of its aggregation. The Commission required each RTO/ISO to revise its tariff to establish any necessary physical parameters that distributed energy resource aggregators must submit as part of their registration process only to the extent these parameters are not already represented in general registration requirements or bidding parameters applicable to distributed energy resource aggregations.²⁷⁹

148. Next, the Commission directed each RTO/ISO to revise its tariff to require distributed energy resource aggregators to provide a list of the individual distributed energy resources participating in their aggregations to the RTO/ISO.²⁸⁰ The Commission stated that, if an RTO/ISO needs additional information beyond this list, the RTO/ISO should identify and explain in its compliance filing what additional specific information about the individual distributed energy resources within an aggregation the RTO/ISO needs. The Commission stated that each RTO/ISO should also propose how the information requested must be shared with the RTO/ISO and affected distribution utilities. As part of these tariff revisions, the Commission stated that each RTO/ISO must also require that the distributed energy resource aggregator update that list of individual resources and associated information as it changes.²⁸¹ The Commission also found that the distributed energy resource aggregator, not an individual distributed energy resource in the aggregation, is the single point of contact with the RTO/ISO, and that the aggregator would be responsible for managing, dispatching, metering, and settling the individual distributed energy resources in its aggregation.²⁸²

²⁷⁹ *Id.* P 237.

²⁸⁰ *Id.* P 238.

²⁸¹ *Id.* (referring to discussion concerning modifications to list of resources in aggregation); *see id.* P 336.

²⁸² *Id.* P 239.

149. The Commission found that aggregate settlement data for a distributed energy resource aggregation, as well as performance data for individual distributed energy resources in a distributed energy resource aggregation are necessary for the participation of any type of resource in RTO/ISO markets and to enable the RTOs/ISOs to perform necessary audit functions.²⁸³ Therefore, the Commission required each RTO/ISO to revise its tariff to require each distributed energy resource aggregator to maintain and submit aggregate settlement data for the distributed energy resource aggregation, so that the RTO/ISO can regularly settle with the distributed energy resource aggregator for its market participation. The Commission also required each RTO/ISO to revise its tariff to require each distributed energy resource aggregator to provide, upon request from the RTO/ISO, performance data for individual resources in a distributed energy resource aggregation for auditing purposes.

150. The Commission stated that the requirements for settlement and performance data should be consistent with the settlement and auditing data requirements for other market participants.²⁸⁴ To reduce the burden on distributed energy resource aggregators and the RTOs/ISOs, the Commission found that distributed energy resource aggregators should only be required to retain that performance data for individual distributed energy resources in an aggregation that the RTO/ISO deems necessary for auditing purposes. The Commission stated that, to the extent that an RTO/ISO does not need certain performance data from individual distributed energy resources in a distributed energy resource aggregation for auditing purposes, it should not require a distributed energy resource aggregator to retain that information for individual distributed energy resources participating in a distributed energy resource aggregation.

a. Filing

151. MISO proposes to require DERAs to engage with DER owners to determine availability and capabilities of potential DEARs.²⁸⁵ MISO states that this engagement includes collecting information on interconnection and retail agreement terms, and resource operating capabilities as required during DEAR registration.²⁸⁶ MISO explains that after a DERA selects DERs to aggregate and has collected the requisite information, the DERA then registers the DEAR with MISO. MISO also states that the DERA will submit information needed to perform both an EDC Technical Review and EDC/LSE and

²⁸³ *Id.* P 240.

²⁸⁴ *Id.*

²⁸⁵ Transmittal at 12

²⁸⁶ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0) § 38.7.A.i.

LBA eligibility review to ensure there is no double counting.²⁸⁷ According to MISO, such information includes the DER types, sizes, locations, and operating characteristics necessary for MISO and the EDC to perform their reviews.²⁸⁸ MISO asserts that DERAs are required to attest that any DER requiring a valid interconnection has a valid agreement in place.

152. MISO states that a DERA must submit offers to reflect its forecasted availability, communicate outages, and submit accurate offers into MISO's Energy and Operating Reserve Markets.²⁸⁹ MISO asserts that DERAs participating in the Resource Adequacy construct will need to meet applicable Planning Resource requirements, Must Offer, and performance requirements in accordance with Tariff Module E-1 and the Resource Adequacy BPM.

b. Data Request Response

153. In response to Commission staff's request for MISO to identify any physical parameters that are not represented in general registration requirements or bidding parameters applicable to DERAs, and to point to where in the Tariff these parameters are established, MISO states that in section 38.7(A)(i) there is a requirement that the DERA provide during registration the "maximum level of participation [in MW] and location of each DER within the DEAR being registered."²⁹⁰ Additionally, MISO explains that the physical parameters for all resources are part of Attachment E of the Network and Commercial Model BPM and that any additional parameters for DEARs will be included there.

154. In response to Commission staff's request about how physical parameter information is shared, MISO explains that section 38.7(A)(ii) of the Tariff states that "the transmission provider will provide LBAs and EDCs with access to the physical location and magnitude of each resource registered by a DERA to perform an [EDC/LSE and LBA eligibility review]."²⁹¹ MISO states that it receives the information from the DERA and shares it with the EDC and LBA.

²⁸⁷ *Id.*, § 38.7.A.ii.

²⁸⁸ *Id.*, § 38.7.

²⁸⁹ Transmittal at 12.

²⁹⁰ Data Request Response at 24.

²⁹¹ *Id.*

155. In response to Commission staff's request for MISO to explain what would determine whether the initial registration of or changes to a DEAR would require EDC, LSE, and LBA confirmation and/or RERRA approval, MISO states that the EDC, LSE, and LBA confirmation and/or RERRA approval is required for all initial DEAR registrations and would only be required for a modification if the DERA is adding additional resources to an existing registration.²⁹²

156. In response to Commission staff's request to identify the Tariff sections that specify the confirmation and approval process referenced in the preceding answer, MISO quotes section 38.7(A) of the Tariff:

DERAs must update the list of DERs in each aggregation and any associated information and data associated with the constituent DERs. DERAs will not be required to re-register the entire DEAR for such modifications. During the time that spans the date the DERA submits an addition of or change to DERs within a DEAR and the time that the addition of or change to a DEAR is confirmed by the EDC, LSE, and LBA, whether explicit or by default, the addition of or change to a DEAR will be considered unapproved and therefore incapable of participating in the applicable Transmission Provider Markets. However, the DERA may continue to offer from the unmodified portion of the DEAR during reviews by the EDC, LSE, and LBA.²⁹³

157. Responding to Commission staff's request that MISO explain why the phrase "but not limited to" is included in its Tariff revisions to section 38.7(A)(i)—"DERA registration will include but not be limited to the following information, for each DEAR"—MISO states that the phrase is included to provide flexibility regarding changes to technology or resource types over time.²⁹⁴

158. In response to Commission staff's request for an explanation regarding whether MISO expects to require information of the DEAR beyond what is specified in the Tariff,

²⁹² *Id.*

²⁹³ *Id.* at 25.

²⁹⁴ *Id.*

MISO explains that if there is a need for additional data to support new technology or a new product, the Tariff or BPM would be revised accordingly.²⁹⁵

159. In the Data Request, Commission staff asked MISO to explain what information MISO proposes to seek from the DERA with respect to this specific requirement, and MISO responds that it is seeking the DER Group information, including measurement and verification methodology, because that information is needed for settlement.²⁹⁶

160. Responding to Commission staff's request for MISO to clarify when a DEAR is required to provide a list of the individual resources in its DEAR and to identify the Tariff section establishing this requirement, MISO states that the list of individual resources in a DEAR is required when the reliability review is conducted.²⁹⁷ Further, MISO states that section 38.7(A)(i) of the Tariff states that during initial registration or modification of a DEAR, a DERA will provide "the anticipated products the DERA is registering the DEAR to provide."

161. In response to Commission staff's request for MISO to clarify whether additional information is needed on individual DERs beyond what is included in the list of resources, MISO explains that it will provide specific information for individual DERs in the Demand Response BPM-26.²⁹⁸

162. When asked to clarify whether there is a requirement for DERAs to maintain and submit aggregate settlement data for each DEAR, and to provide performance data for individual resources in a DEAR for auditing purposes when requested, MISO contends that a single meter data value will be reported for each DER Group rather than individual DERs, but the DERA must retain the individual DER meter data for auditing purposes.²⁹⁹

163. In the Data Request, Commission staff asked MISO to indicate whether its proposed requirements for settlement and performance data applied to DERAs are consistent with the settlement and auditing data requirements for other Market Participants. MISO explains that DEARs will be settled based on meter data submitted

²⁹⁵ *Id.* at 26.

²⁹⁶ *Id.*

²⁹⁷ *Id.*

²⁹⁸ *Id.*

²⁹⁹ *Id.* at 27.

for each DER Group within a DEAR.³⁰⁰ MISO further states that any demand response type DER Groups within a DEAR will be measured and verified through the existing measurement and verification protocols contained in Attachment TT of the Tariff, and that DEAR performance will then be based on the sum of the DER Groups' performance. MISO states that the performance criteria applied to the DEAR will be the same as that applied to existing generation resources.³⁰¹

164. In the Data Request, Commission staff asked MISO to clarify whether, to the extent that MISO does not need certain performance data from individual DERs in a DEAR for auditing purposes, MISO would require a DERA to retain that information for individual DERs participating in a DEAR. MISO explains that, to the extent that MISO would not need certain performance data for an individual DER in a DEAR, MISO would not require the DERA to retain such data and that additional details will be incorporated into the appropriate BPMs.³⁰²

165. Responding to Commission staff's request for MISO to explain in detail the specific information required that would be considered sufficient to allow defining or mapping to a single EP Node, MISO asserts that the enrollment of a DER in a DEAR is below the commercial and network model and that the assets, ownership of the assets and default parameters of the asset are maintained in the commercial model.³⁰³ Additionally, MISO explains that as part of the registration process, the DERA confirmation will require an indication that the individual DER elements of the DEAR are all electrically connected within the distribution system to the representative EP Node location, and that this connection must be independent of any transmission system connections.³⁰⁴

c. Data Request Response Protest

166. Public Interest Organizations claim that MISO proposes to leave to the BPMs details on additional information needed from individual DERs and details on when MISO might need additional information from DERAs on the performance on individual

³⁰⁰ *Id.* at 28.

³⁰¹ *Id.*; MISO, Tariff, Module E-1 (Resource Adequacy) (31.0.0); BPM-11 (Resource Adequacy).

³⁰² Data Request Response at 28.

³⁰³ *Id.*

³⁰⁴ *Id.* at 28-29.

DERs within an aggregation.³⁰⁵ Public Interest Organizations express concern that these, among other issues, have the potential to enable or prohibit successful participation of DERAs in MISO's markets, and important details are being pushed to the BPM process. Public Interest Organizations contend that MISO pushing important details to the BPM process is especially concerning given its recent change in posture to its DER Task Force.³⁰⁶ Public Interest Organizations state that prior to MISO submitting its compliance filing MISO was actively engaged in stakeholder discussions, and that MISO is now largely absent from these ongoing discussions.³⁰⁷

d. Answer to Data Request Response Protests

167. MISO contends that Public Interest Organizations' assertions regarding the DER Task Force are incomplete, incorrect, and misleading.³⁰⁸ MISO states that the DER Task Force continues its work.

e. Commission Determination

168. We find that MISO's proposal partially complies with the information and data requirements of Order No. 2222.³⁰⁹

169. We find that MISO complies with the requirement that each distributed energy resource aggregator maintain and submit aggregate settlement data for the distributed energy resource aggregation so that the RTO/ISO can regularly settle with the distributed energy resource aggregator for its market participation, and to provide, upon request from the RTO/ISO, performance data for individual resources in a distributed energy resource aggregation for auditing purposes.³¹⁰ We find that MISO proposes to require DERAs to maintain and submit aggregate settlement data, consistent with its requirements for other

³⁰⁵ Public Interest Organizations Data Request Response Protest at 7.

³⁰⁶ The DER Task Force serves as a forum for stakeholders and MISO to address cross-functional issues associated with MISO's Order No. 2222 compliance as well as non-Order No. 2222 DER issues. Midcontinent Independent System Operator, Inc., *Distributed Energy Resources Task Force*, <https://www.misoenergy.org/stakeholder-engagement/committees/DERTF/>.

³⁰⁷ Public Interest Organizations Data Request Response Protest at 8.

³⁰⁸ Answer to Data Request Response Protests at 12.

³⁰⁹ Order No. 2222, 172 FERC ¶ 61,247 at P 236.

³¹⁰ *Id.* PP 236, 240.

generators.³¹¹ MISO explains that it requires a single meter data value for each DER Group for settlement purposes and requires the DERA to retain the individual DER meter data for auditing purposes.³¹² We also find that MISO's proposed requirements for settlement data are consistent with the settlement and auditing data requirements for other Market Participants because MISO requires settlement data from DERAs, consistent with its requirements for settlement data from generators and other customers, including measurement and verification protocols applied to existing resources, as applicable.³¹³ We note that MISO also reserves the right to audit meter data submissions of Market Participants, including DERAs, under Module C, section 38.2.5.e.³¹⁴ Finally, we find that, consistent with Order No. 2222, MISO does not require DERAs to retain information for individual DERs participating in a DERA that MISO does not need for auditing purposes.³¹⁵ MISO states that, to the extent it does not need certain performance data for individual DERs, it does not require the DERA to retain such data.³¹⁶

170. We disagree with Public Interest Organizations that MISO's proposal lacks detail on when MISO might need additional information from DERAs on the performance of individual DERs within an aggregation. As noted above, MISO explains that DERAs must retain the individual DER meter data for auditing purposes, as the Tariff specifies that MISO has the right to audit meter data submissions of Market Participants, including DERAs.

³¹¹ MISO, Proposed Tariff, Module C, § 38.7(D) (Distributed Energy Resource Aggregators) (32.0.0) § 38.7.D ("DERAs must submit meter data for the DEAR to the Transmission Provider using the same [DER] Groups that were used in the definition of the resource.").

³¹² Data Request Response at 27. MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.E.

³¹³ Order No. 2222, 172 FERC ¶ 61,247 at P 240; MISO, Proposed Tariff, Module C, § 38.2.5 (Market Participant Obligations) (49.0.0) ("All Market Participants must maintain meter and equipment records, and associated documentation that demonstrates compliance with the requirements of this Section Such records must be maintained for a period of seven years and be made available for inspection by the Transmission Provider upon request.").

³¹⁴ Data Request Response at 28.

³¹⁵ Order No. 2222, 172 FERC ¶ 61,247 at P 240.

³¹⁶ Data Request Response at 28.

171. We find that MISO complies with the requirement to require the distributed energy resource aggregator to update any list of individual resources and associated information as it changes.³¹⁷ MISO requires “DERAs [to] update the list of DERs in each aggregation and any associated information and data associated with the constituent DERs.”³¹⁸ However, while MISO’s proposal requires DERAs to update the list of DERs in a DEAR, we find that MISO does not comply with the requirement to require distributed energy resource aggregators to provide a list of the individual distributed energy resources participating in their aggregations to the RTO/ISO.³¹⁹ MISO proposes to require DERAs to provide the anticipated products the DERA is registering the DEAR to provide, but MISO’s Tariff does not require DERAs to initially provide a list of the individual DERs in its DEAR.³²⁰ Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that revises its Tariff to require the DERA to provide a list of the individual DERs participating in its DEARs to MISO.

172. We find that MISO complies with the requirement to revise the Tariff to:
(1) include any requirements for distributed energy resource aggregators that establish the information and data that a distributed energy resource aggregator must provide about the physical and operational characteristics of its aggregation; and (2) establish any necessary information that must be submitted for the individual distributed energy resources.³²¹ Proposed Tariff section 38.7(A)(i) establishes that DERAs will provide information for each DEAR including: the single LSE serving the load associated with the DEAR, with relevant contact information; the EDC where the DER(s) comprising the DEAR are located, with relevant contact information; applicable RERRAs, with relevant contact information; the LBA where the DEAR is located, with relevant contact information; the anticipated products the DERA is registering the DEAR to provide; information regarding measurement and verification procedures appropriate to the types of DER(s) within the DEAR; a list of end use account number(s) and other relevant customer information to identify the end use customer comprising each DER; and the maximum level of participation (MW) and location of each DER within the DEAR being registered

³¹⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 238.

³¹⁸ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

³¹⁹ Order No. 2222, 172 FERC ¶ 61,247 at P 238.

³²⁰ Data Request Response at 26.

³²¹ Order No. 2222, 172 FERC ¶ 61,247 at P 236.

sufficient to allow defining or mapping to a single EP Node.³²² As such, we also find that MISO has clearly identified the necessary physical parameters that distributed energy resource aggregators must submit as part of their registration process to the extent these parameters are not already represented in general registration requirements or bidding parameters applicable to distributed energy resource aggregations, as required by Order No. 2222.³²³

173. We note Public Interest Organizations' argument that MISO's explanation that it will provide details in its BPMs regarding additional information that it needs from individual DERs is unreasonable. MISO explains in its Data Request Response that the Tariff provides flexibility regarding potential changes to technology or resource types.³²⁴ We appreciate MISO's explanation that as technology evolves, it may need additional data to accurately represent the new technology. However, we reiterate that Order No. 2222 requires each RTO/ISO to revise its tariff to establish any necessary information that must be submitted for the individual distributed resources³²⁵ — in other words, any necessary information should be in the tariff. To the extent MISO requires additional information from individual DERs, MISO must submit a filing to revise its Tariff accordingly; however, further details regarding these information requirements may be included in the BPM.³²⁶

174. Finally, we find that MISO's proposal complies with the requirement of Order No. 2222 that each RTO/ISO propose how any information regarding individual distributed energy resources within an aggregation that the RTO/ISO requests must be shared with the RTO/ISO and affected distribution utilities.³²⁷ MISO proposes that the LSE or EDC and LBA will have access to relevant information used by the Transmission Provider,

³²² MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.i. MISO notes that, as part of the registration process, the DERA confirmation will require an indication that the individual DER elements of the DEAR are all electrically connected within the distribution system to the representative EP Node location. Data Request Response at 28-29.

³²³ Order No. 2222, 172 FERC ¶ 61,247 at P 237.

³²⁴ Data Request Response at 25.

³²⁵ Order No. 2222, 172 FERC ¶ 61,247 at P 236.

³²⁶ Data Request Response at 25-26 ("If MISO discovers a need for additional data to support new technology or a new product, the Tariff or [BPM] would be revised accordingly.").

³²⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 238.

subject to the appropriate protection of any confidential information.³²⁸ MISO states that the information accessible to the LSE, EDC, transmission owner, and LBA includes, but is not limited to, information such as the end use customer account number(s) and meter identification number(s).

6. Metering and Telemetry System Requirements

175. In Order No. 2222, the Commission added section 35.28(g)(12)(ii)(f) to the Commission's regulations to require each RTO/ISO to revise its tariff to establish market rules that address metering and telemetry hardware and software requirements necessary for distributed energy resource aggregations to participate in RTO/ISO markets.³²⁹ The Commission explained that it understood the need to balance, on one hand, the RTO's/ISO's need for metering and telemetry data for settlement and operational purposes, and, on the other hand, not imposing unnecessary burdens on distributed energy resource aggregators.³³⁰ Therefore, the Commission stated that it would not prescribe the specific metering and telemetry requirements that each RTO/ISO must adopt; rather, the Commission provided the RTOs/ISOs with flexibility to establish the necessary metering and telemetry requirements for distributed energy resource aggregations and required each RTO/ISO to explain in its compliance filing why such requirements are just and reasonable and do not pose an unnecessary and undue barrier to individual distributed energy resources joining a distributed energy resource aggregation.

176. To implement this requirement, the Commission directed each RTO/ISO to explain, in its compliance filing, why its proposed metering and telemetry requirements are necessary.³³¹ The Commission stated that this explanation should include a

³²⁸ MISO, Proposed Tariff, Module C, § 38.7.A.iii(2) (Distributed Energy Resource Aggregators) (32.0.0); *see id.*, Module C, § 38.7.A.ii (Distributed Energy Resource Aggregators) (32.0.0); Data Request Response at 24.

³²⁹ Order No. 2222, 172 FERC ¶ 61,247 at P 262.

³³⁰ *Id.* P 263.

³³¹ *Id.* P 264. For example, the Commission indicated that metering requirements could be necessary for the distributed energy resource aggregator to provide the settlement and performance data to the RTO/ISO, or to prevent double counting of services. *Id.* (referring to discussions on provision of such data and double counting); *see also id.* PP 159-64 (discussing requirements concerning double counting), 240 (discussing requirements concerning settlement and performance data). The Commission indicated that telemetry requirements could be necessary for the RTO/ISO to have sufficient situational awareness to dispatch the aggregation and the rest of the system efficiently. *Id.* P 264.

discussion about whether, for example, the proposed requirements are similar to requirements already in existence for other resources and steps contemplated to avoid imposing unnecessarily burdensome costs on the distributed energy resource aggregators and individual resources in distributed energy resource aggregations that may create an undue barrier to their participation in RTO/ISO markets.

177. In Order No. 2222, the Commission stated that the distributed energy resource aggregator is the single point of contact with the RTO/ISO, responsible for managing, dispatching, metering, and settling the individual distributed energy resources in its aggregation.³³² The Commission further found that the distributed energy resource aggregator is the entity responsible for providing any required metering and telemetry information to the RTO/ISO.

178. The Commission stated that it would not require uniform metering requirements across all RTOs/ISOs, nor would it require each RTO/ISO to impose uniform metering requirements on individual distributed energy resources.³³³ Rather, the Commission provided flexibility to RTOs/ISOs to propose specific metering requirements, including any that may apply to individual distributed energy resources that the RTO/ISO demonstrates are needed to obtain any required performance data for auditing purposes and to address double compensation concerns. Similarly, the Commission provided flexibility to the RTO/ISO as to whether to propose specific telemetry requirements for individual distributed energy resources in an aggregation. The Commission stated that the need for such requirements may depend, for example, on whether the RTO/ISO allows multi-node aggregations or how multi-node aggregations are implemented.

179. The Commission stated that it would not require RTOs/ISOs to establish metering and telemetry hardware and software requirements for distributed energy resource aggregations that are identical to those placed on existing resources, or to establish different or additional metering and telemetry requirements for distributed energy resource aggregations.³³⁴ Rather, the Commission expected that RTOs/ISOs will base any proposed metering and telemetry hardware and software requirements for distributed energy resource aggregations on the information needed by the RTO/ISO while avoiding unnecessary requirements that may act as a barrier to individual distributed energy resources joining distributed energy resource aggregations or to distributed energy resource aggregations participating in the wholesale markets. However, the Commission required that metering data for settlement purposes at the distributed energy resource

³³² *Id.* P 266; *see id.* P 239.

³³³ *Id.* P 267.

³³⁴ *Id.* P 268.

aggregation level be consistent with settlement data requirements for other resource types.

180. The Commission stated that each RTO's/ISO's proposed metering requirements should rely on meter data obtained through compliance with distribution utility or local regulatory authority metering system requirements whenever possible for settlement and auditing purposes.³³⁵ The Commission further found that this requirement also applies to existing telemetry infrastructure. With respect to jurisdictional concerns raised by some commenters, the Commission noted that any additional RTO/ISO metering and telemetry requirements would not change those required by state or local regulatory authorities and would be required solely to assist with settlements and audits of activity in RTO/ISO markets or to provide RTOs/ISOs with the real-time information needed to reliably and efficiently dispatch their systems.

181. In response to concerns about potential costs and burdens that could be imposed on distribution utilities as a result of the requirement that RTOs/ISOs rely on metering and telemetry data obtained through compliance with distribution utility or local regulatory authority metering system requirements whenever possible, the Commission stated that it expected that, in general, this information will be provided by individual distributed energy resources to distributed energy resource aggregators, and from distributed energy resource aggregators to RTOs/ISOs.³³⁶ However, to the extent that the RTO/ISO proposes that such information come from or flow through distribution utilities, the Commission required that RTOs/ISOs coordinate with distribution utilities and RERRAs to establish protocols for sharing metering and telemetry data and that such protocols minimize costs and other burdens and address concerns raised with respect to privacy and cybersecurity.

182. Finally, the Commission found that the RTO/ISO tariffs should include a basic description of the metering and telemetry practices for distributed energy resource aggregations as well as references to specific documents that will contain further technical details.³³⁷

a. Filing

183. MISO proposes revisions to the Tariff to establish market rules that address metering and telemetry hardware and software requirements necessary for DEARs to

³³⁵ *Id.* P 269.

³³⁶ *Id.* P 270.

³³⁷ *Id.* P 271.

participate in MISO's markets.³³⁸ MISO states that DEARs will be required to provide telemetry through Inter Control Center Protocol (ICCP) via private Wide Area Network (WAN). According to MISO, this ICCP via WAN approach, compared to other considered alternatives, will provide more efficient market settlements, remove some potential make whole payments, and improve residual load calculations. MISO asserts that data is required to be submitted every two seconds for all dispatchable DEARs, regardless of size or product. MISO also states that DEARs will be modeled as generation at the transmission/distribution interface and will require telemetry at the aggregation level, rather than the DER level. MISO explains that the LBA calculation of load will remain unchanged and will include the MW quantities of DEAR output. MISO asserts that this will support operational reliability by providing more accurate information on the supply/demand balance in every dispatch interval.

184. MISO states that ICCP via WAN is the best telemetry technology currently available and that its applicability to DEARs is comparable to other resources providing the same products and services in MISO's markets.³³⁹ MISO asserts that ICCP via WAN has fewer service interruptions and more control than considered alternatives, is known to meet security and operational requirements, and is an established means for exchanging operational data with a known process for implementation. MISO also states that ICCP via WAN has certain limitations and related expenses that could impose impediments on DERA participation, and that MISO will continue to evaluate alternate technologies.

b. Comments/Protests

185. Protesters argue that MISO's telemetry requirements establish unreasonable barriers to DEAR participation. AEMA argues that requiring ICCP via WAN communications creates a barrier that even MISO acknowledges and MISO does not require ICCP for multiple resource Market Participant types that provide Capacity or Spinning Reserves.³⁴⁰ Therefore, AEMA seeks rules that are not cost barriers to smaller DEARs. MISO TOs argue that some distribution utilities do not utilize ICCP metering and request that MISO allow for the use of current EDC telemetry practices.³⁴¹ In contrast, DTE Electric supports the ICCP via WAN requirement for real-time setpoint instructions and agrees that ICCP is an industry-standard protocol that should be used for

³³⁸ Transmittal at 13.

³³⁹ *Id.*

³⁴⁰ AEMA Protest at 12-13.

³⁴¹ MISO TOs Protest at 9.

real-time operational data exchange between EDCs and DERAs.³⁴² DTE Electric argues that ICCP is preferable to extensible markup language (XML), which is a competing data exchange tool, because its format is efficient and well-documented and permits a wide body of existing systems to interchange data with each other. Similarly, DTE Electric notes that adopting new or under-accepted interchange formats bears development costs and efforts which should be carefully evaluated so they do not impact the timeline for DEAR participation in MISO.

186. In addition, MISO TOs argue that MISO's measurement and verification proposal and performance criteria for DERAs require more detail.³⁴³ MISO TOs claim that DEARs should be subject to the same metering and verification requirements as all other resources interconnected with the bulk electric system. More specifically, Entergy argues that MISO's proposed metering provisions are inadequate due to the absence of a provision specifying that separate load metering is required to accurately settle and measure the performance of a DEAR that includes a Distributed Demand Response Resource.³⁴⁴ Entergy states that separate load metering of individual Distributed Demand Response Resources in a heterogeneous DEAR is required so that the performance of both the injection and withdrawal assets in the aggregation can be measured. Entergy further argues that the need for load metering in a heterogeneous DEAR is required for the auditing function as set out in Order No. 2222.

187. Entergy argues that MISO should measure performance of any Distributed Demand Response Resource in a DEAR using a before and after metering approach.³⁴⁵ Entergy argues that consumption baselines allow payment for non-performance and can prevent payment for actual performance, which is unreasonable.³⁴⁶ Entergy contends that

³⁴² DTE Electric Protest at 9.

³⁴³ MISO TOs Protest at 9, 13.

³⁴⁴ Entergy Protest at 9.

³⁴⁵ *Id.* at 12.

³⁴⁶ *Id.* at 12-13. *See* Entergy Motion to Lodge at 2-3 (noting that, in the 2021 State of the Market Report for the MISO Electricity Markets, the IMM recommends changes to the Tariff to require a Demand Response Resource to report its anticipated consumption absent any curtailment so that the settlement can be based on a comparison of the resource's actual consumption to the lower of its anticipated consumption or its calculated baseline).

the owner of a demand response resource should be able to reasonably bid in demand response without the need for consumption baselines.³⁴⁷

188. Entergy argues that, absent an agreement by the EDC, EDC meters should be used in MISO settlements for homogeneous DEARs of demand response resources because any demand response resource in a DEAR is a retail customer of the EDC.³⁴⁸ Entergy argues that requiring the use of EDC meters will eliminate, or substantially avoid, disputes over meter data.³⁴⁹ Entergy argues that, in many settlements of Aggregations of Retail Customers (ARC) in MISO, the third-party metering systems had median hourly differences of 50% or more between the ARC-submitted data and the EDC meter data.

189. Further, Entergy argues that MISO's proposal to make submitted meter data available for LSE and EDC review lacks clarity regarding the location and timing of the data availability.³⁵⁰ Entergy and MISO TOs support development of and request a DERA metering repository that can be accessed by entities demonstrating requisite authority to access such data.³⁵¹ They argue that a repository is the most efficient means for sharing meter data needed by the EDC, Market Participant, and MISO and that it would provide significant efficiencies in the settlement of DEAR transactions and reduce disputes over errors in, or conflicts regarding, meter data.³⁵² MISO TOs claim that greater detail is required regarding settlement data.³⁵³

190. Several commenters raise concerns about cybersecurity, data privacy, and related issues, including requests for greater clarity on cybersecurity requirements.³⁵⁴ Missouri Commission states that MISO's implementation process should allow states and local stakeholders to address cybersecurity and privacy issues, as third-party DER aggregations raise concerns about data privacy and DER technology presents cybersecurity

³⁴⁷ Entergy Protest at 13.

³⁴⁸ *Id.*

³⁴⁹ *Id.* at 14.

³⁵⁰ *Id.* at 15.

³⁵¹ *Id.* at 14-15; MISO TOs Protest at 10.

³⁵² Entergy Protest at 15; MISO TOs Protest at 10.

³⁵³ MISO TOs Protest at 13.

³⁵⁴ Illinois Commission Comments at 11; MISO TOs Protest at 13.

challenges.³⁵⁵ Missouri Commission contends that MISO should continue to coordinate with stakeholders to ensure that protocols for communication and sharing data minimize costs and adequately address privacy and cybersecurity concerns. DTE Electric requests a more thorough approach to how communication is performed and what information should be included or excluded to protect customer privacy, information security and critical infrastructure.³⁵⁶ Illinois Commission states that cybersecurity considerations must be included in the design stage to prevent disruptions and unnecessary future costs.³⁵⁷ Illinois Commission argues that MISO's filing does not address detailed encryption and cryptographic key management aspects of its metering and telemetry requirements.³⁵⁸ Illinois Commission also argues that MISO's filing does not fully address the necessity for interoperable and resilient communications throughout the system, including at the individual DER level.³⁵⁹ Illinois Commission calls for a clear assignment of responsibility of security issues to ensure that its concerns are satisfied, and argues that the aggregator should be responsible for cybersecurity implementation and updates.³⁶⁰

191. WPPI argues that MISO fails to prevent the consumption of wholesale withdrawals at the retail level for the purposes of avoiding retail purchases.³⁶¹ WPPI expresses concern that MISO's filing does not explain how or whether MISO will ensure that DEARs comply with the prohibition on consuming wholesale purchases at retail contained in sections 39.2.5E.a and 40.2.7C.a, which specify that "[a]ll Energy withdrawn must be stored and later reinjected and may not be used to serve retail load."³⁶² WPPI also expresses concern that MISO will not require retention of sufficient information to detect any issues, pointing out that the proposed Tariff appears to require Market Participants to retain information only about the DEAR.³⁶³ Moreover, WPPI

³⁵⁵ Missouri Commission Protest at 15.

³⁵⁶ DTE Electric Protest at 8.

³⁵⁷ Illinois Commission Comments at 11-12, 16.

³⁵⁸ *Id.* at 12.

³⁵⁹ *Id.* at 13.

³⁶⁰ *Id.* at 14-15.

³⁶¹ WPPI Protest at 1-2.

³⁶² *Id.* at 4.

³⁶³ *Id.* at 4-5.

states, unlike individual distributed Electric Storage Resources that participate directly in the MISO markets, distributed Electric Storage Resources participating in DEARs will not have a direct contractual relationship with MISO.³⁶⁴ WPPI states that the Commission should require MISO to explain how its proposal will prevent the misuse of wholesale purchases and to revise its proposed Tariff language as necessary.³⁶⁵

c. Answers

192. MISO argues that protests should be rejected because MISO's proposal uses existing, defined technology and pathways to facilitate DEAR implementation.³⁶⁶ MISO further argues that its proposal employs industry standard technologies, and MISO expresses an intention to continue dialogue with stakeholders to accommodate future shifts in technology.³⁶⁷ MISO notes that the ICCP telemetry path is from the DERA to MISO and the DERA may use an alternative technology to connect to the individual DERs.³⁶⁸ MISO further notes that existing Market Participants have chosen third-party entities to provide telemetry services that provide the ICCP link to MISO. MISO argues that these factors should mitigate the cost burden of the ICCP technology to the end DER device. MISO notes that ICCP is the current industry standard but acknowledges that the industry is exploring new standards. MISO states that, if new standards are established, it will continue stakeholder discussions regarding the appropriateness of adopting new standards.

193. In addition, MISO states that the DEAR resource type can provide a full range of products to the MISO markets and thus has equivalent communication requirements to other resource types with similar ability to participate in all market products.³⁶⁹ MISO notes that these products require responding to real-time dispatch signals including a potential second-by-second dispatch for regulation and, comparable to existing resources, MISO will use the ICCP connection to provide real-time dispatch instructions to the DERA to enable their participation in these products. MISO states that it does not require real-time ICCP communications for certain resource types like Demand Response Resource Type I, but that these resources are limited in the products they can provide to

³⁶⁴ *Id.* at 5.

³⁶⁵ *Id.* at 6.

³⁶⁶ MISO Answer at 11.

³⁶⁷ *Id.* at 11-13.

³⁶⁸ *Id.* at 14.

³⁶⁹ *Id.* at 13.

the market. MISO notes that it is not precluding qualified DEARs from participating as Demand Response Resource Type I.

194. In response to WPPI, MISO asserts that the Commission has interpreted court precedent as meaning that RTOs/ISOs have no jurisdiction to determine whether or when a retail transaction has occurred.³⁷⁰ MISO states that it only receives wholesale transaction data from a DEAR and is not privy to retail transaction information. Thus, MISO states, it cannot determine if a wholesale withdrawal was used for retail purposes. MISO explains that the EDCs/LSEs have access to the wholesale meter data of a DEAR and could report any such suspected activity to the RERRA or IMM.

195. In response, WPPI states that it recognizes that states have jurisdiction to determine whether a retail transaction has occurred, but contends that the Commission's recent station power decision in *Indiana Municipal Power Agency v. PJM Interconnection, L.L.C.* makes clear that it is not appropriate for RTO/ISO tariffs to enable entities to improperly avoid retail purchases through the misuse of wholesale purchases, and therefore, MISO should be required to explain how it will prevent such misuse, and to revise its proposal as necessary.³⁷¹ WPPI claims that, absent adequate information reporting and monitoring provisions, MISO could enable the owners of certain distribution-connected storage resources to avoid retail transactions by misusing wholesale energy withdrawals for end-use consumption.³⁷² WPPI also responds that, while MISO suggests that any misuse "may" be detected if the IMM or RERRA conducts an audit, MISO does not claim—let alone demonstrate—that its proposal requires the collection, submission, or retention of sufficient information to enable an audit to detect this improper use of wholesale withdrawals.³⁷³

d. Data Request Response

196. In the Data Request, Commission staff requested MISO to describe existing or proposed metering and telemetry requirements necessary for DERAs to participate in MISO's markets. In response, MISO states that DEARs will be required to provide telemetry through ICCP via WAN and that DEARs will be modeled as generation at the transmission/distribution interface and will require telemetry at the aggregation rather

³⁷⁰ *Id.* at 18 (citing *Calpine Corp. v. FERC*, 702 F.3d 41 (D.C. Cir. 2012)).

³⁷¹ WPPI Answer at 2-3 (citing *Indiana Municipal Power Agency v. PJM Interconnection, L.L.C.*, 172 FERC ¶ 61,243 (2020), *order on reh'g*, 174 FERC ¶ 61,035 (2021) (*IMPA*)).

³⁷² *Id.* at 3.

³⁷³ *Id.* at 2.

than the DER level.³⁷⁴ MISO states that under this requirement, the LBA's calculation of load will remain as it is today and will include the MW quantities of DEAR output. MISO states that this approach supports operational reliability by providing more accurate information on the supply and demand balance in every Dispatch Interval.

197. MISO further states that it will provide market notifications including start/stop instructions from the market systems to Market Participants and LBAs as well as back-up Dispatch Instructions to Market Participants and LBAs through notifications.³⁷⁵ MISO notes that section 38.2.5.d of the Tariff describes communication obligations of the Market Participant.³⁷⁶ MISO states that, for settlement purposes, the DERA will submit meter data for each DER Group that comprises a DEAR, and for demand response type DER Groups, MISO will use the measurement and verification protocols of Attachment TT to determine the load reduction amount. MISO states that it will sum the DER Group volumes to the aggregate DEAR.

198. In the Data Request, Commission staff requested MISO to explain why MISO's proposed metering and telemetry requirements for DEARs are just and reasonable and do not pose an unnecessary and undue barrier to individual DERs joining a DEAR. With respect to the two-second telemetry requirement applied to all DEARs regardless of DEAR size or services provided, MISO states that ICCP via WAN matches the requirements for other resources participating in the MISO markets, meets security and operational requirements, has fewer service interruptions and more control than considered alternatives, and is an established means for exchanging operational data with a known process for implementation.³⁷⁷ MISO further notes that the DERA is able to select the communication methodology with the individual DERs.³⁷⁸ MISO states that,

³⁷⁴ Data Request Response at 30. MISO notes that current market generation real-time telemetry input requirements are stated in MISO BPM 031 – ICCP Data Requirements section 2.4 Real-Time Market Data Input and that the MISO Reliability Data Specification (RTO-SPEC-006) further outlines the required information for a MISO Modeled Generator in section 3. MISO further notes that a DEAR-type unit designation will be added and required data identified as the product is developed.

³⁷⁵ *Id.* (citing Rauch Test. at 46).

³⁷⁶ Section 38.2.5e of the Tariff describes Market Participant Metering obligations, BPM 31 describes ICCP Data Requirements, and RTO-SPEC-006 describes MISO Reliability Data Specification.

³⁷⁷ Data Request Response at 30-31 (citing Rauch Test. at 45).

³⁷⁸ *Id.* at 31.

because telemetry is imperative for situational awareness, MISO must understand what resources are doing in real time.

199. In the Data Request, Commission staff requested what limitations and expenses ICCP via WAN may impose on DERAs and whether they pose an undue barrier to individual resources joining a DEAR. MISO states that there is a cost associated with the installation and maintenance of a new WAN circuit but that this technology is already in place for real-time data acquisition and MISO's existing customers and members will not incur any additional costs related to ICCP via WAN.³⁷⁹ MISO further notes that some existing Market Participants have chosen third-party entities to provide telemetry services that provide the ICCP link to MISO.³⁸⁰ MISO argues that these factors should mitigate the cost burden of the ICCP technology to the end DER device.³⁸¹

200. In the Data Request, Commission staff requested MISO to explain whether MISO's proposed telemetry requirements allow the use of existing telemetry infrastructure whenever possible. MISO states that WAN links MISO to Resource Owners and LBAs and that existing Resource Owners who register a DEAR would use the existing link for DEAR telemetry.³⁸² MISO further notes that the DERA may use an alternative technology to connect to the individual DERs.

201. In the Data Request, Commission staff requested that MISO explain whether MISO proposes to allow individual DERs in a DEAR to be metered directly at the device level and if so, how MISO will ensure that a behind-the-meter Distributed Energy Resource's directly metered output or load is not double counted along with the overall load reported for the facility. In response, MISO states that double counting will not occur because MISO is requiring telemetry for all DEARs and that the LBA load calculation will include the output of the DEARs. In the Data Request, Commission staff asked MISO to explain what, if any, responsibility the DERA and/or the Meter Data Management Agent (MDMA)³⁸³ bears for providing metering and telemetry information to MISO other than the two-second telemetry data required for dispatch and to identify

³⁷⁹ *Id.*

³⁸⁰ *Id.* at 31-32.

³⁸¹ *Id.* at 32.

³⁸² *Id.*

³⁸³ In the Data Request Response, MISO states that the Tariff defines the MDMA as "an entity designated by the Market Participant that provides meter data, representing the Actual Energy Injections or Actual Energy Withdrawals at each [CP Node] for which it is designated, to the Transmission Provider on a Market Participant's behalf." *Id.*

any relevant Tariff language. In response, MISO notes that section 38.2.1 of the Tariff states that the Market Participant “ultimately remains financially liable for, and shall settle, all such Market Activities with the Transmission Provider.”³⁸⁴

202. In the Data Request, Commission staff asked MISO to explain how MISO’s proposal complies with the requirement of Order No. 2222 that the distributed energy resource aggregator is the entity responsible for providing any required metering information to the RTO/ISO. In response, MISO states that during the registration process, the DERA may select an MDMA or choose to serve as its own MDMA.³⁸⁵ MISO notes that section 38.2.2 of the Tariff states that “if a Market Participant designates another entity as a Scheduling Agent or MDMA, the Market Participant remains financially responsible for all Market Activities represented by the Scheduling Agent or MDMA.”

203. In the Data Request, Commission staff asked MISO to describe MISO’s meter data submission deadline for DERAs and the location of the submission deadline in the Tariff. In response, MISO states that the meter data submission timeline will follow Attachment TT and has a deadline of 103 days for dispatched energy and 5 days for ancillary services.³⁸⁶

204. In the Data Request, Commission staff asked MISO to explain whether MISO’s metering requirements rely on meter data obtained through compliance with distribution utility or local regulatory authority metering system requirements whenever possible for settlement and auditing purposes. In response, MISO states that it expects revenue quality meter data for settlement purposes.³⁸⁷ MISO states that it is acceptable for the DERA to obtain meter data through compliance with the distribution utility’s metering requirements and that respecting existing communication methods identified by the distribution utility in the interconnection process minimizes costs for distribution companies and DER owners.

205. In the Data Request, Commission staff asked MISO to explain whether MISO proposes that metering and telemetry data come from or flow through distribution utilities and whether MISO coordinated with distribution utilities and RERRAs to establish protocols for sharing metering and telemetry data and to describe these protocols and identify their location in the Tariff or BPMs. Commission staff also asked MISO to

³⁸⁴ *Id.*

³⁸⁵ *Id.*

³⁸⁶ *Id.* at 33 (citing Rauch Test. at 48).

³⁸⁷ *Id.*

explain how such protocols minimize costs and other burdens and address privacy and cybersecurity needs. In response, MISO states that it proposes that telemetry data will flow to and from the DERA and that the LBA should receive the telemetry to be able to effectively meet the Local Balancing Authority requirements.³⁸⁸ MISO states that it discussed telemetry with the DER Task Force and determined that ICCP is the current industry standard for communicating real-time measurements. MISO further explains that it uses certificates to authorize access to the MISO Market Portal.³⁸⁹ MISO states that privacy and cybersecurity provisions align with the rest of its stakeholder access protocols to ensure that authorized parties can both provide and receive necessary data and communications.

e. Data Request Response Protest

206. AEMA argues that MISO fails to provide a reasonable explanation for its proposed indiscriminate application of telemetry requirements to DEARs.³⁹⁰ AEMA states that the rationale that DEAR must supply ICCP because other resources provide it is fundamentally flawed because Demand Response Resource Type I resources can provide energy, spinning reserves, and supplemental reserves without providing ICCP telemetry. AEMA asserts that MISO fails to even attempt to address this significant and costly barrier to participation, and that MISO has not given a reasonable explanation for why a small resource should have this requirement. AEMA requests that the Commission reject MISO's proposed ICCP telemetry requirement for all resources and direct MISO to develop telemetry rules in a manner that will not be a cost barrier to market participation, particularly for smaller size DEARs providing limited market services.³⁹¹

f. Answer to Data Request Response Protests

207. MISO reiterates that its DEAR design requires telemetry for each DEAR and emphasizes the reliability benefits of this requirement.³⁹² According to MISO, the DERA may select other modes of communication with the individual DER, which reduces the

³⁸⁸ *Id.*

³⁸⁹ *Id.* at 34.

³⁹⁰ AEMA Data Request Response Comments at 7.

³⁹¹ *Id.* at 7-8.

³⁹² Answer to Data Request Response Protests at 9 (citing Rauch Test. at 45 (stating that "DEARs will be modeled as generation at the transmission/distribution interface and will require telemetry at the aggregation, rather than the DER, level"))).

telemetry burden for individual DER. MISO asserts that heterogeneous aggregations will be more flexible, and the design needs to support their ability to provide all product and services and be comparable to other resources providing the same products and services.

g. Commission Determination

208. We find that MISO's proposal partially complies with the metering and telemetry system requirements of Order No. 2222.³⁹³

209. With respect to metering, we find that MISO's proposal complies with the requirement that each RTO/ISO revise its tariff to establish market rules that address metering requirements necessary for distributed energy resource aggregations to participate in RTO/ISO markets.³⁹⁴ MISO proposes to require that each Market Participant, including DERAs, or its chosen MDMA provide the Transmission Provider with meter data, consistent with the requirements for other resources.³⁹⁵ MISO proposes that the meter data submission timeline will follow Attachment TT, with 103 days for dispatched energy and five days for ancillary services.³⁹⁶ We find that MISO has explained why such requirements are just and reasonable and do not pose an unnecessary or undue barrier to individual distributed energy resources joining a distributed energy resource aggregation.³⁹⁷ MISO has demonstrated that its metering requirements are necessary for DEARs to participate in MISO's markets. In addition, MISO discusses steps contemplated to avoid imposing unnecessarily burdensome costs on distributed energy resource aggregators and individual distributed energy resources in distributed energy resource aggregations.³⁹⁸ For example, MISO states that, rather than require meter data from individual DERs, it only requires the DERA to report a single meter data value for each DER Group within a DEAR.³⁹⁹

³⁹³ Order No. 2222, 172 FERC ¶ 61,247 at P 262.

³⁹⁴ *Id.*

³⁹⁵ MISO, Proposed Tariff, Module C, § 38.2.5 (Market Participant Obligations) (49.0.0), § 38.2.5.e.iii.

³⁹⁶ Data Request Response at 33.

³⁹⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 263.

³⁹⁸ *Id.* P 264.

³⁹⁹ Data Request Response at 12, 27.

210. We disagree with Entergy that MISO's proposed metering provisions are inadequate due to the absence of a provision specifying that separate load metering is required to accurately settle and measure the performance of a DEAR that includes a Distributed Demand Response Resource, or that MISO should measure performance of any Distributed Demand Response Resource in a DEAR using a before-and-after metering approach.⁴⁰⁰ Under MISO's proposal, the demand response portion of the meter data reported by the DERA will be settled under existing settlement rules developed for Order No. 745 compliance,⁴⁰¹ consistent with Order No. 2222, which does not require changes to existing demand response rules approved in compliance with Order Nos. 719 and 745.⁴⁰² In addition, MISO will apply its existing measurement and verification protocols to DEARs containing resources providing demand response.⁴⁰³

211. Further, we find that MISO's proposal is consistent with the Commission's requirement in Order No. 2222 that metering requirements should rely on meter data obtained through compliance with distribution utility or RERRA metering system requirements whenever possible for settlement and auditing purposes.⁴⁰⁴ Specifically, MISO notes that the DERA may obtain meter data through compliance with the distribution utility's metering requirements, and that respecting existing communication methods identified by the distribution utility in the interconnection process minimizes costs for distribution companies and DER owners.⁴⁰⁵ MISO TOs assert broadly that greater detail is needed regarding settlement data and measurement and verification protocols. We disagree. We find that MISO's proposed settlement data requirements for DEARs are similar to those for other resource types,⁴⁰⁶ and MISO therefore complies with the requirement of Order No. 2222 that meter data for settlement purposes at the

⁴⁰⁰ Entergy Protest at 9, 12.

⁴⁰¹ MISO, Tariff, attach. TT (Measurement and Verification (M and V) Criteria) (36.0.0); Data Request Response at 12; *see* discussion *supra* Part.IV.B.2.b.iv; Order No. 2222, 172 FERC ¶ 61,247 at P 145.

⁴⁰² *See* Order No. 2222, 172 FERC ¶ 61,247 at P 118 (“[T]his final rule does not affect existing demand response rules.”).

⁴⁰³ MISO, Tariff, attach. TT (Measurement and Verification (M and V) Criteria) (36.0.0); Data Request Response at 12.

⁴⁰⁴ Order No. 2222, 172 FERC ¶ 61,247 at P 269.

⁴⁰⁵ Data Request Response at 33.

⁴⁰⁶ MISO, Tariff, Module C, § III (Energy and Operating Reserve Market Processes and Settlement) (30.0.0).

distributed energy resource aggregation level be consistent with settlement data requirements for other resource types.⁴⁰⁷ Like other Market Participants that must submit meter data for settlement purposes, the DERA, or its designated MDMA, will submit meter data for each DER Group that comprises a DEAR.⁴⁰⁸ For demand response type DER Groups, MISO will use the existing measurement and verification protocols of Attachment TT to determine the load reduction amount.⁴⁰⁹

212. Regarding Entergy's argument that EDC meters should be used in MISO settlements for homogeneous DEARs of demand response resources, we note that Order No. 2222 does not require MISO to mandate the use of such meters for settlements. We note that, while MISO's proposal allows a DERA to obtain meter data through compliance with the distribution utility's metering requirements, MISO does not require DERAs to use EDC meters for settlement purposes.⁴¹⁰

213. With respect to telemetry, we find that MISO's proposal complies with the requirement that each RTO/ISO revise its tariff to establish market rules that address telemetry requirements necessary for distributed energy resource aggregations to participate in RTO/ISO markets.⁴¹¹ We also find that MISO explained why its proposed telemetry requirements are just and reasonable and do not pose an unnecessary or undue barrier to individual distributed energy resources joining a distributed energy resource aggregation.⁴¹² We find that MISO's proposal to require DEARs to provide aggregate telemetry through ICCP via WAN reasonably balances the need to maintain reliability with the burden placed on DERAs. MISO explains that ICCP via WAN meets security and operational requirements while having fewer service interruptions and more control than considered alternatives.⁴¹³ MISO also explains that DEARs will be modeled as generation at the transmission/distribution interface (unlike Demand Response Resource Type I resources) and will require telemetry, comparable to other Market Participants

⁴⁰⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 268.

⁴⁰⁸ Data Request Response at 30. *See* MISO, Proposed Tariff, Module C, § 38.2.5 (Market Participant Obligations) (49.0.0) § 38.2.5.e.iii.

⁴⁰⁹ *Id.*

⁴¹⁰ *Id.* at 33.

⁴¹¹ Order No. 2222, 172 FERC ¶ 61,247 at P 262.

⁴¹² *Id.* P 263.

⁴¹³ Data Request Response at 30-31.

providing similar products and services.⁴¹⁴ Given these explanations, we find that MISO has demonstrated that the proposed telemetry requirements for DEARs are just and reasonable. MISO's proposal requires that telemetry data flow to and from the DERA and that the LBA will receive the telemetry to be able to effectively meet the LBA requirements.⁴¹⁵ MISO states that it discussed these metering and telemetry requirements with the DER Task Force and determined that ICCP is the current industry standard for communicating real-time measurements.⁴¹⁶

214. We find that MISO adequately explains why its proposed telemetry requirements are necessary and discusses steps contemplated to avoid imposing unnecessarily burdensome costs on the distributed energy resource aggregators and individual resources in distributed energy resource aggregations that may create an undue barrier to their participation in RTO/ISO markets.⁴¹⁷ MISO explains that it will require telemetry only at the DEAR level and will not require ICCP links between individual DERs and the DER Aggregator.⁴¹⁸ In addition, MISO explains that Market Participants may choose third-party entities to provide telemetry services that provide the ICCP link to MISO, which should mitigate the cost burden of ICCP technology to the end DER device.⁴¹⁹ Further, MISO's proposal to allow a DERA to use an alternative technology to connect to the individual DERs or third-party telemetry services, and to allow existing resource owners to use existing links for DEAR telemetry, provides flexibility and avoids imposing unnecessarily burdensome costs on DERAs and individual DERs that could create an undue barrier to their participation in MISO's markets.⁴²⁰

⁴¹⁴ Transmittal at 13; Data Request Response at 30; MISO Answer at 13 ("While MISO does not require real-time ICCP communications for certain resource types, such as [Demand Response Resource] Type I, these resources are limited in the products they can be provide to the market."). See MISO Proposed Tariff, Module C, § 38.7. (Distributed Energy Resource Aggregators) (32.0.0); § 38.7.C; see also MISO Proposed Tariff, attach. TT, § 3ii (Measurement and Verification (M and V) Criteria) (36.0.0) § 3ii.

⁴¹⁵ Data Request Response at 33.

⁴¹⁶ *Id.*

⁴¹⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 264.

⁴¹⁸ Transmittal at 13.

⁴¹⁹ Data Request Response at 31-32.

⁴²⁰ *Id.* ("There is a cost associated with the installation and maintenance of a new WAN circuit. However, this technology is already in place for real time data acquisition and MISO's existing customers and members will not incur any additional cost related to

215. We also find that MISO's proposal complies with the requirement that telemetry requirements rely on existing infrastructure whenever possible.⁴²¹ In response to MISO TOs' argument that MISO's telemetry requirements should consider the use of current EDC telemetry practices, we note that MISO explains that it proposes to use existing telemetry infrastructure whenever possible, noting that the WAN links MISO to resource owners and LBAs.⁴²² MISO further explains that existing resource owners who register DEARs can use existing links for DEAR telemetry.⁴²³

216. We find that MISO's proposed metering and telemetry requirements are consistent with the Commission's finding in Order No. 2222 that the distributed energy resource aggregator is the entity responsible for providing any required metering and telemetry information to the RTO/ISO.⁴²⁴ Module A, section 1.M of the Tariff establishes that the MDMA "provides meter data, representing the Actual Energy Injections or Actual Energy Withdrawals at each [CP Node] for which it is designated, to the Transmission Provider on a Market Participant's behalf."⁴²⁵ MISO explains that a DERA may serve as its own MDMA or select another MDMA during registration.⁴²⁶ In addition, section 38.2.2 of the Tariff states that if a Market Participant designates another entity as its MDMA, the Market Participant remains financially responsible for all market activities represented by the MDMA.

217. We also find that the Tariff includes a basic description of the metering and telemetry practices for distributed energy resource aggregations as well as references to specific documents that will contain further technical details.⁴²⁷ As discussed above, the Tariff sets forth, among other things, the requirement for DERAs to provide meter

ICCP via WAN. It is important to note that the ICCP telemetry path is between the DERA and MISO. The DERA may use an alternative technology to connect to the individual DERs.").

⁴²¹ Order No. 2222, 172 FERC ¶ 61,247 at P 269.

⁴²² Data Request Response at 32.

⁴²³ *Id.*

⁴²⁴ Order No. 2222, 172 FERC ¶ 61,247 at P 266.

⁴²⁵ MISO, Proposed Tariff, § 1.M. (Definitions) (71.0.0).

⁴²⁶ Data Request Response at 32.

⁴²⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 271.

data,⁴²⁸ the deadlines for the submission of meter data and the role of the MDMA in submitting such data,⁴²⁹ and that DERAs provide telemetry via ICCP.⁴³⁰

218. We find that MISO may not comply with the requirement that, to the extent that metering and telemetry data comes from or flows through distribution utilities, RTOs/ISOs must coordinate with distribution utilities and RERRAs to establish protocols for sharing metering and telemetry data that minimize costs and other burdens and address concerns raised with respect to customer privacy and cybersecurity.⁴³¹ Under MISO's proposal, although MISO does not require that metering and telemetry data will come from or flow through distribution utilities,⁴³² DERAs may designate another entity as the MDMA, and there is nothing in the Tariff that precludes a DERA from designating its distribution utility as the MDMA.⁴³³ MISO's proposal does not clearly specify the protocols for sharing metering and telemetry data, and does not explain how such protocols minimize costs and other burdens and address privacy and cybersecurity concerns, as Order No. 2222 requires.⁴³⁴ Regarding commenters' request for a data repository as an efficient means for sharing meter data, we find that Order No. 2222 did not require RTOs/ISOs to establish a data repository for sharing meter data. With respect to commenters' concerns regarding privacy and cybersecurity, the Commission found that such concerns, in general, were outside the scope of the proceeding.⁴³⁵ Nevertheless, we acknowledge MISO's commitment to continue to monitor changes in technology and update its requirements as necessary by working with stakeholders.⁴³⁶ Accordingly, we

⁴²⁸ MISO, Proposed Tariff, Module C, § 38.2.5 (Market Participant Obligations) (49.0.0) § 38.2.5.e.iii.

⁴²⁹ *Id.*, § 38.2.5.e.iii-iv.

⁴³⁰ *Id.*, § 38.7.C.

⁴³¹ Order No. 2222, 172 FERC ¶ 61,247 at P 270.

⁴³² Data Request Response at 33.

⁴³³ MISO, Proposed Tariff, Module A, § 1.M (Definitions) (73.0.0).

⁴³⁴ Order No. 2222, 172 FERC ¶ 61,247 at P 270.

⁴³⁵ *Id.* PP 362-363.

⁴³⁶ Data Request Response at 33-34 ("MISO acknowledges that the industry is exploring new standards. MISO has repeatedly stated to stakeholders that it would continue to evaluate evolving technologies that may be introduced in the future. If new

direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that clarifies whether a DERA may designate its distribution utility as the MDMA and, if so, to coordinate with distribution utilities and RERRAs to establish protocols for sharing metering and telemetry data, which minimize costs and other burdens and address concerns raised with respect to privacy and cybersecurity, as Order No. 2222 requires.⁴³⁷

219. Finally, we reject the arguments raised in WPPI's protest and find that Order No. 2222 does not require RTOs/ISOs to prevent wholesale withdrawals of energy from being improperly consumed at retail. We note that the LSEs/EDCs are in the best position to detect and report any misuse of wholesale withdrawals to the IMM or RERRA and will have the performance data of individual DERs to do so, as required by Order No. 2222,⁴³⁸ and that this is a reasonable mechanism to prevent DEARs from consuming wholesale purchases at retail. In response to Entergy's concerns about the availability of meter data, we note that MISO proposes in section 38.7.D of the Tariff that "[t]he DEAR settlement information can be viewed by the LSE, EDC, and LBA via the Market Portal once the Hourly Ex Post LMPs are approved." We also note that Order No. 2222 does not require MISO to place Market Participant-level metering obligations on the individual DERs and that WPPI has not demonstrated that such requirements would be necessary to address double counting concerns.⁴³⁹

7. Coordination between the RTO/ISO, Aggregator, Distribution Utility, and RERRA

a. Market Rules on Coordination

220. In Order No. 2222, the Commission added section 35.28(g)(12)(ii)(g) to the Commission's regulations to require each RTO/ISO to revise its tariff to establish market rules that address coordination between the RTO/ISO, the distributed energy resource

standards are established, MISO will continue stakeholder discussions regarding the appropriateness of adapting applicable new standards.").

⁴³⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 270; *see* NYISO Compliance Order, 179 FERC ¶ 61,198 at P 216.

⁴³⁸ *See* Order No. 2222, 172 FERC ¶ 61,247 at P 236 (requiring retention of "performance data for individual distributed energy resources in a distributed energy resource aggregation for auditing purposes"); *see* discussion *supra* Part IV.B.5.e.

⁴³⁹ *See* Order No. 2222, 172 FERC ¶ 61,247 at P 264 (noting, as an example, that an RTO/ISO could explain on compliance that its proposed metering requirements are necessary to prevent double counting of services).

aggregator, the distribution utility, and the RERRAs.⁴⁴⁰ The Commission stated that coordination requirements should not create undue barriers to entry for distributed energy resource aggregations but must also consider the substantial role of distribution utilities and state and local regulators in ensuring the safety and reliability of the distribution system.⁴⁴¹

i. Filing

221. MISO states that it proposes new Tariff sections 38.1.1.z, 38.1.1.aa, and 38.7 to address coordination between MISO, the DERA, the EDC, and the RERRA.⁴⁴² MISO states that its coordination framework includes key activities and communications between MISO, DERAs, RERRAs, transmission owners, EDCs/LSEs, and LBAs to facilitate the interconnection, registration, operation, settlement, and modification of DEARs.

222. As discussed in more detail below, MISO proposes an EDC Technical Review conducted by the EDC that targets DER distribution system reliability impacts that were not initially accounted for during interconnection evaluation. The EDC will evaluate potential double counting as part of the EDC/LSE and LBA eligibility review. In addition, MISO proposes separate transmission owner and MISO Reliability Reviews during which potential transmission system reliability impacts will be evaluated.

ii. Commission Determination

223. We find that MISO partially complies with the coordination requirements of Order No. 2222. While MISO proposes market rules on coordination in compliance with Order No. 2222, we find that MISO does not comply with certain coordination requirements, as discussed further below.

b. Role of Distribution Utilities

224. To implement section 35.28(g)(12)(ii)(g) of the Commission's regulations, the Commission in Order No. 2222 required each RTO/ISO to modify its tariff to incorporate a comprehensive and non-discriminatory process for timely review by a distribution utility of the individual distributed energy resources that comprise a distributed energy resource aggregation, which is triggered by initial registration of the distributed energy resource aggregation or incremental changes to a distributed energy resource aggregation

⁴⁴⁰ *Id.* P 278.

⁴⁴¹ *Id.* P 279.

⁴⁴² Transmittal at 14.

already participating in the markets.⁴⁴³ The Commission required each RTO/ISO to demonstrate on compliance that its proposed distribution utility review process is transparent, provides specific review criteria that the distribution utilities should use, and provides adequate and reasonable time for distribution utility review.⁴⁴⁴

225. More specifically, the Commission stated that each RTO/ISO must coordinate with distribution utilities to develop a distribution utility review process that includes criteria by which the distribution utilities would determine whether (1) each proposed distributed energy resource is capable of participation in a distributed energy resource aggregation; and (2) the participation of each proposed distributed energy resource in a distributed energy resource aggregation will not pose significant risks to the reliable and safe operation of the distribution system.⁴⁴⁵ In Order No. 2222-A, the Commission clarified that, although it is providing each RTO/ISO with the flexibility to develop review procedures and criteria appropriate for its region, the Commission expects that the criteria proposed on compliance will require that an RTO/ISO decision to deny wholesale market access to a distributed energy resource for reliability reasons be supported by a showing that the distributed energy resource presents significant risks to the reliable and safe operation of the distribution system.⁴⁴⁶ In addition, the Commission clarified that only the distribution utility hosting a distributed energy resource (i.e., the utility that owns and/or operates the distribution system to which the resource is interconnected) should be given an opportunity to review the addition of that resource to a distributed energy resource aggregation.⁴⁴⁷

226. To support this distribution utility review process, the Commission stated that RTOs/ISOs must share with distribution utilities any necessary information and data about the individual distributed energy resources participating in a distributed energy resource aggregation.⁴⁴⁸ In Order No. 2222-A, the Commission clarified that the specific information regarding a distributed energy resource that is provided by a distribution

⁴⁴³ Order No. 2222, 172 FERC ¶ 61,247 at P 292.

⁴⁴⁴ *Id.* P 293.

⁴⁴⁵ *Id.* P 292.

⁴⁴⁶ Order No. 2222-A, 174 FERC ¶ 61,197 at P 76 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 292) (referencing the criteria by which the distribution utilities will determine whether a proposed distributed energy resource will pose “significant risks to the reliable and safe operation of the distribution system”).

⁴⁴⁷ *Id.* P 70.

⁴⁴⁸ Order No. 2222, 172 FERC ¶ 61,247 at P 292; *see id.* PP 236-40.

utility to an RTO/ISO as part of the distribution utility review process should be shared with the distributed energy resource aggregator.⁴⁴⁹ The Commission explained that such information could include whether a resource: (1) affects the safety and reliability of the distribution system; or (2) is capable of participating in an aggregation.⁴⁵⁰ To the extent that a distribution utility declines to provide distributed energy resources with the information that they need to participate in RTO/ISO markets via an aggregation, the Commission stated that it expects that RTOs/ISOs will provide an avenue to facilitate those resources' participation, including, where appropriate, the use of the RTO/ISO dispute resolution procedures.⁴⁵¹

227. In addition, in Order No. 2222, the Commission stated that the results of a distribution utility's review must be incorporated into the distributed energy resource aggregation registration process.⁴⁵²

228. The Commission also required each RTO/ISO to revise its tariff to specify the time that a distribution utility has to identify any concerns regarding a distributed energy resource seeking to participate in the RTO/ISO markets through an aggregation.⁴⁵³ The Commission stated that each RTO/ISO should propose a timeline that reflects its regional needs.⁴⁵⁴ In Order No. 2222-A, the Commission limited the length of distribution utility review to no more than 60 days.⁴⁵⁵ The Commission stated that, if an RTO/ISO believes unusual circumstances could give rise to the need for additional distribution utility review time, the RTO/ISO may propose provisions for certain exceptional circumstances that may justify additional review time.⁴⁵⁶ The Commission encouraged shorter review

⁴⁴⁹ Order No. 2222-A, 174 FERC ¶ 61,197 at P 75 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 292).

⁴⁵⁰ *Id.*

⁴⁵¹ *Id.*

⁴⁵² Order No. 2222, 172 FERC ¶ 61,247 at P 292.

⁴⁵³ *Id.* P 295.

⁴⁵⁴ *Id.* The Commission stated that any distribution utility review must be completed within a limited but reasonable amount of time and that it expects a reasonable amount of time may vary among RTOs/ISOs but should not exceed 60 days.

⁴⁵⁵ Order No. 2222-A, 174 FERC ¶ 61,197 at P 72 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 295).

⁴⁵⁶ *Id.*

periods for smaller aggregations and resources to the maximum extent practicable, and reiterated that any proposed review period must be shown to be reasonable based on what is being reviewed.⁴⁵⁷

229. In Order No. 2222, the Commission stated that the RTOs/ISOs must include potential impacts on distribution system reliability as a criterion in the distribution utility review process.⁴⁵⁸ The Commission clarified in Order No. 2222-A that, when the Commission found that RTOs/ISOs must include potential impacts on distribution system reliability as a criterion in the distribution utility review process, the Commission was referring specifically to any incremental impacts from a resource's participation in a distributed energy resource aggregation that were not previously considered by the distribution utility during the interconnection study process for that resource.⁴⁵⁹

230. In addition, the Commission found that the distribution utility should have the opportunity to request that the RTO/ISO place operational limitations on an aggregation or the removal of a distributed energy resource from an aggregation based on specific significant reliability or safety concerns that the distribution utility clearly demonstrates to the RTO/ISO and distributed energy resource aggregator on a case-by-case basis.⁴⁶⁰ The Commission clarified in Order No. 2222-A that, to the extent a distribution utility recommends the removal of a distributed energy resource from an aggregation due to a reliability concern, an RTO/ISO should not remove the resource without a demonstration by the distribution utility that the resource's market participation presents a threat to distribution system reliability.⁴⁶¹

231. In Order No. 2222, the Commission declined to provide a larger and decision-making role for the distribution utilities and stated that requiring or permitting

⁴⁵⁷ *Id.*

⁴⁵⁸ Order No. 2222, 172 FERC ¶ 61,247 at P 297.

⁴⁵⁹ Order No. 2222-A, 174 FERC ¶ 61,197 at P 79 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 297).

⁴⁶⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 297. For example, the Commission stated that the RTOs/ISOs may consider requiring a signed affidavit or other evidence from the distribution utility that a distributed energy resource's participation in RTO/ISO markets would pose a significant risk to the safe and reliable operation of the distribution system, and processes to contest the distribution utility's recommendation for removal or for operational limitations to be placed on the aggregation. *Id.*

⁴⁶¹ Order No. 2222-A, 174 FERC ¶ 61,197 at P 76 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 297).

distribution utilities to authorize the participation of distributed energy resources in RTO/ISO markets directly or as part of an aggregation could create a barrier to distributed energy resource aggregation.⁴⁶²

232. Finally, the Commission required each RTO/ISO to revise its tariff to incorporate dispute resolution provisions as part of its proposed distribution utility review process.⁴⁶³ The Commission stated that each RTO/ISO should describe how existing dispute resolution procedures are sufficient or, alternatively, propose amendments to its procedures or new dispute resolution procedures specific to this subject.⁴⁶⁴ In Order No. 2222-A, the Commission stated that disputes regarding the distribution utility review process—including those between non-host distribution utilities and a host distribution utility or the RTO/ISO—may be resolved through the RTO's/ISO's dispute resolution process, the Commission's Dispute Resolution Service, or complaints filed pursuant to FPA section 206 at any time.⁴⁶⁵

i. Filing

233. MISO states that there is a voluntary pre-registration process, as part of the overall coordination process, that is not specifically part of MISO's registration process whereby the DERA, EDC, transmission owner, and potentially the RERRA may exchange information on pre-registration technical considerations.⁴⁶⁶ MISO states that its formal coordination process begins with the registration of the DERA as a Market Participant, through which the DERA may begin the process of registering DEAR.⁴⁶⁷ MISO explains that the DERA registration timeline begins with MISO's review of the DERA application, followed by an EDC/LSE and LBA eligibility review of the DERs in the DEAR, and then a review by the RERRA for any eligibility issues, including potential double counting or dual compensation between retail and wholesale programs.⁴⁶⁸ MISO

⁴⁶² Order No. 2222, 172 FERC ¶ 61,247 at P 298.

⁴⁶³ *Id.* P 299.

⁴⁶⁴ *Id.*

⁴⁶⁵ Order No. 2222-A, 174 FERC ¶ 61,197 at P 70 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 299).

⁴⁶⁶ Rauch Test. at 27-28.

⁴⁶⁷ Transmittal at 15.

⁴⁶⁸ *Id.* at 16.

states that the EDC/LSE and RERRA each have 10 days to review the DERA application, and that the EDC will then have up to 60 days to perform its EDC Technical Review.

234. MISO explains that, assuming no unresolved eligibility issues or reliability concerns are identified during the EDC Technical Review, it will then model the DEAR in the commercial model, consistent with the regular network model releases.⁴⁶⁹ MISO expects that there will be more frequent opportunities for DEAR registration as regular network model updates are released more frequently than on a quarterly basis due to MISO's model manager project.

235. MISO contends that the EDC Technical Review should target DER distribution system reliability impacts that were not initially accounted for during interconnection evaluation.⁴⁷⁰ MISO explains that this could include factors such as: (1) the effects of coordinated controllable load, storage, and distributed generation; (2) the expected DER operational responses to specific MISO market products (e.g., ancillary services) if materially different than current mode; or (3) significant modifications to DER operation that do not require a new DER interconnection.⁴⁷¹

236. MISO states that its proposed EDC Technical Review framework is intended to work across the diverse set of RERRAs, EDCs, and transmission owners in MISO.⁴⁷² MISO explains that the framework streamlines EDC Technical Reviews that show no system impacts, while creating a pathway for novel or more complex DEARs that do require closer examination, such as when a potential reliability impact is identified. MISO contends that many EDC Technical Reviews could begin and end at the EDC level after a preliminary screen is complete, assuming no impacts on either the distribution system or the transmission system are identified.

237. MISO asserts that the EDC Technical Review process will be transparent and that MISO requires that such review process ensure the safety and reliability of the distribution system.⁴⁷³ MISO states that for situations where the EDC determines DEAR operation will result in adverse safety or reliability impacts on the distribution system, the EDC should communicate to the DERA the specific EDC Technical Review criteria violated and mitigations uncovered during the analysis. MISO contends that the

⁴⁶⁹ *Id.*

⁴⁷⁰ *Id.* at 17.

⁴⁷¹ *Id.* at 17-18.

⁴⁷² *Id.* at 18.

⁴⁷³ *Id.*

subsequent DERA decision period to address EDC feedback should fall outside of the 60-day maximum timeframe.⁴⁷⁴

238. MISO states that the EDC may look at distribution system modifications as a mitigation, which could include activities ranging from equipment configuration changes (e.g., relay settings) to asset upgrades (e.g., control upgrades).⁴⁷⁵ MISO contends that the option for system upgrades should be handled by mutual agreement between the EDC and DERA, subject to RERRA oversight. MISO states that under the mutual agreement, the EDC Technical Review could result in either rejecting the DEAR as-is or allowing a specific capacity to proceed until the system modification is complete, at which time the DERA would apply for an enrollment modification to achieve participation for the full, initially proposed DEAR.⁴⁷⁶

239. MISO asserts that, when a potential reliability impact to the transmission system is identified by the EDC, the DERA and MISO will be notified, and the transmission owner will perform screening to determine if the potential reliability impact warrants further evaluation by MISO.⁴⁷⁷ MISO states that the EDC and transmission owner will coordinate with regards to any information necessary to perform screening. MISO explains that if the transmission owner determines the screening thresholds are exceeded, then DEAR information will be forwarded to MISO for additional screening and analysis.

240. According to MISO, the transmission owner Reliability Review and MISO Reliability Review processes are separate from the 60-day EDC Technical Review process.⁴⁷⁸ MISO expects these process timelines to be carried out on a “best-efforts” basis, with results communicated to the DERA within five business days from the completion of the review. MISO states that the EDC Technical Review would be contingent on completion of the transmission owner Reliability Review, and MISO Reliability Review if needed, and on any resulting transmission system upgrade being constructed, as applicable. MISO also states that the 60-day EDC Technical Review will resume upon acceptance and/or implementation of conditions resulting from the transmission owner Reliability Review, and MISO Reliability Review if needed, ending the registration suspension.

⁴⁷⁴ *Id.* at 19.

⁴⁷⁵ *Id.*

⁴⁷⁶ *Id.*

⁴⁷⁷ *Id.*

⁴⁷⁸ *Id.*

241. MISO proposes that the transmission owner Reliability Review establishes two options for determining whether potential reliability impacts identified in an EDC Technical Review are forwarded to MISO for evaluation. The transmission owner Reliability Review may use either (1) transmission owner-defined Reliability Review thresholds (e.g., screens, supplemental reviews, or studies) or (2) MISO-defined Reliability Review thresholds.⁴⁷⁹ MISO explains that it proposes to provide this optionality because some transmission owners suggested that they know their system best, while others want MISO to take a more active role in determining when a MISO review is required. MISO notes that there is process-efficiency value in the former approach because customized analyses can filter out a greater portion of DEAR that are not expected to have system impacts.⁴⁸⁰ At the same time, MISO argues, the latter approach may provide stakeholders a greater sense of transparency and simplify implementation for transmission owners. MISO proposes that any transmission owner-defined Reliability Review thresholds shall not be more restrictive than the MISO-defined Reliability Review thresholds. According to MISO, the review criteria should be based on voltage, thermal, and protection system impacts, using standards-based approaches where possible. MISO states that transmission owner-defined thresholds shall be publicly posted and updated when revised. MISO contends that the transmission owner Reliability Review provides transmission owners a transparent path to streamline Reliability Reviews, based on unique knowledge and experience of their system, without creating safety or reliability risks.

242. MISO states that it expects to define its Reliability Review thresholds for use by transmission owners through the ongoing IPWG stakeholder process.⁴⁸¹ MISO anticipates that transmission owner reviews will be relatively rare; therefore, MISO proposes that these proceed on a “reasonable efforts” basis, consistent with how certain state DER interconnection procedures handle Affected Systems. MISO asserts that the transmission owner should provide the EDC with an estimated timeframe during the analysis scoping phase.⁴⁸² MISO states that if the transmission owner performs a screen or study that shows no adverse technical impacts, then that result should be communicated to the EDC in a timely manner so that the EDC can communicate the result to the DERA.⁴⁸³ However, MISO states that if the transmission owner evaluation identifies the need for a MISO study, then the transmission owner should communicate

⁴⁷⁹ *Id.*

⁴⁸⁰ *Id.* at 19-20.

⁴⁸¹ *Id.* at 20.

⁴⁸² *Id.* at 20-21.

⁴⁸³ *Id.* at 21.

that to MISO and the EDC in a timely manner. MISO contends that the transmission owner should provide MISO with the necessary data to initiate a MISO-level Reliability Review. MISO anticipates that the data requirements will be refined with stakeholders through the IPWG forum.

243. MISO proposes to collect Reliability Reviews forwarded from transmission owners to perform MISO's own Reliability Reviews on a quarterly basis.⁴⁸⁴ Thus, MISO explains, there will be a cutoff date for DEAR Technical Reviews to enter the MISO DEAR Technical Review process. MISO explains that grouping DEAR for study on regular cycles provides MISO an efficient pathway for processing DEAR potential impacts, including under high levels of DEAR market participation. MISO states that its Reliability Review will be separate from, but consistent with, MISO's groupings in its Generator Interconnection Definitive Planning Phase cycles. MISO asserts that this process is well-suited for times of increased study activity, particularly when compared to alternatives like sequential processing.

244. MISO states that it plans to "right-size" the Reliability Review, using a range of screening and study tools to evaluate impacts on the Bulk Electric System depending on the DEAR proposed in the area.⁴⁸⁵ MISO expects to gain further experience with DER-related studies through retail-level DER studies that will be forwarded to MISO prior to Order No. 2222 implementation. According to MISO, this experience, along with IPWG stakeholder input, will help MISO refine its Reliability Review tools and approaches leading up to MISO's Order No. 2222 implementation. MISO also states that it will communicate the results of its Reliability Review to the appropriate transmission owner and EDC. MISO asserts that the EDC will compile all the DEAR requirements and technical justifications and communicate the results to the DERA.

245. MISO states that, consistent with Order No. 2222, DEARs will not enter MISO's Generator Interconnection queue at any point.⁴⁸⁶ Instead, MISO explains that the inputs and outputs of MISO's Generator Interconnection Study Process and DEAR Technical Review process are coordinated to ensure validity of results across the different evaluations.

246. MISO contends that most DERAs will seek to take the distribution system "as-is" and avoid potentially costly system upgrades to mitigate DEAR system impacts.⁴⁸⁷ In the

⁴⁸⁴ *Id.*

⁴⁸⁵ *Id.*

⁴⁸⁶ *Id.*; *see also supra* P 26.

⁴⁸⁷ Transmittal at 22.

case where system upgrades are needed, however, MISO proposes that costs of system upgrades stemming directly from DEAR operation (i.e., not legacy DER issues) follow cost-causation principles, with the DERA having responsibility for DEAR-caused costs across the electric system. According to MISO, Reliability Review processes that evaluate DEARs sequentially can clearly identify cost-causation; however, processing Reliability Reviews in groups on a quarterly basis may require developing additional allocation methods for DEARs contributing to a common system impact. Therefore, MISO states that it will work with stakeholders through the IPWG to develop cost allocation methods for DEAR group studies.

247. MISO states that EDCs, transmission owners, and MISO may incur costs as part of the EDC Technical Review process; therefore, where appropriate, RERRAs should consider adjusting their regulations to require the DERA to fund EDC Technical Reviews to ease the burden that might otherwise be borne by retail electric customers.⁴⁸⁸ MISO also states that the EDC, transmission owner, and RERRA may wish to document DEAR cost-allocation principles for RERRA-jurisdictional facilities. MISO states that it will publish DEAR cost-allocation principles in a future BPM revision.

248. MISO states that during the EDC Technical Review, disputes may arise between the DERA and EDC, transmission owner, or MISO regarding timeframe compliance, technical evaluation approaches, required upgrades, DEAR material modifications, and cost allocation.⁴⁸⁹ MISO contends that RERRAs may determine a need to develop new DEAR dispute resolution processes, or they could adapt existing dispute resolution processes to meet the need. MISO states that while RERRA-jurisdictional disputes might usually be between the DERA and EDC or DERA and transmission owner, RERRAs may see disputes between a DERA and DER owner. MISO explains that disputes between the DERA and EDCs may best be handled by the RERRA.⁴⁹⁰ MISO proposes that any disputes with MISO be handled through the general dispute resolution process as set forth in proposed amendments to section 12 of the Tariff. MISO explains that it is working with stakeholders and RERRAs to better delineate which issues are best handled by which process.

ii. Substantive Issues

249. We find that MISO's proposal partially complies with the requirements in Order Nos. 2222 and 2222-A with respect to the role of distribution utilities. As an initial matter, we find that MISO developed its distribution utility review process through

⁴⁸⁸ *Id.*

⁴⁸⁹ *Id.* at 23.

⁴⁹⁰ *Id.* at 27.

consultation with distribution utilities, consistent with the requirement of Order No. 2222.⁴⁹¹ We direct MISO to continue to coordinate with distribution utilities in developing the further compliance filing that we direct below.

(a) Registration Process

(1) Comments/Protests

250. The Michigan Commission supports MISO's proposed registration, interconnection, operations, and dispute resolution processes for DERAs, stating that the proposed framework appropriately involves aggregators, distribution utilities, MISO itself, and state and local regulatory authorities.⁴⁹² According to OMS, MISO's proposed registration process, including the 10-day compatibility check and 60-day EDC Technical Review, ensures that each entity can review DEAR impacts, and appropriately balances the efficiency of the registration process with an important assessment of distribution system impacts.⁴⁹³

251. AEE/SEIA argue that MISO violates the 60-day distribution utility review process deadline required by Order No. 2222 because, if the EDC identifies reliability impacts, then the transmission owner will conduct a Reliability Review that is not subject to the strict 60-day deadline.⁴⁹⁴

252. AEMA argues that MISO's registration process is essentially a 90-day process because it adds a 30-day clock to the 60-day EDC review.⁴⁹⁵ AEMA states that although the roles for every entity involved in the review process are important, MISO proposes additional time and additional hurdles for each DEAR (including modifications) to clear

⁴⁹¹ Order No. 2222, 172 FERC ¶ 61,247 at P 292; Transmittal at 31 ("MISO held eight [EDC] focused meetings and four RERRA meetings with topics focused on the coordination between MISO and those stakeholders as it relates to the registration and operation of DEARs.").

⁴⁹² Michigan Commission Protest at 12-15.

⁴⁹³ OMS Protest at 12-13.

⁴⁹⁴ AEE/SEIA Joint Protest at 13.

⁴⁹⁵ AEMA Protest at 18.

until it can participate. AEMA requests that the Commission direct MISO to propose Tariff changes to achieve a more efficient registration and aggregation review process.⁴⁹⁶

253. Consumers Energy argues that the data in the registration application is not always accurate or verifiable, so a 10-business day review period each for the EDC/LSE and RERRA may be insufficient.⁴⁹⁷ Consumers Energy suggests that the length of this review period be set forth in the appropriate BPM instead of the Tariff, to allow for refinement. It contends that the required time for RERRA and EDC review will be affected by factors such as communication channels between the EDCs, RERRA, DERA, and MISO.

254. DTE Electric requests that MISO confirm that it is proposing 10 business days each for the EDC/LSE and RERRA review and 60 business days for EDC review.⁴⁹⁸ DTE Electric states that Order No. 2222 does not specify calendar or business days as to the distribution utility review period. DTE Electric also asserts that MISO should clarify that the EDC review will be paused pending review of potential reliability impacts and that the suspension will be lifted when MISO and the transmission owner agree that upgrades are either unnecessary or have been identified and agreed to by the DERA.⁴⁹⁹ DTE Electric avers that this clarification is necessary because of the potential for transmission mitigations to affect distribution studies and required actions or upgrades. DTE Electric also argues that it is speculative for MISO to state its belief that many EDC Technical Reviews could begin and end at the EDC level after a preliminary screen is complete.

255. MISO TOs assert that it is unclear whether the EDC Technical Review timeline is affected when an application is incomplete or inaccurate.⁵⁰⁰ MISO TOs argue that each review period contemplated in the review process should be initiated only when an application is complete. MISO TOs state that it appears that DERAs will be able to submit offers before an EDC has completed its review, and MISO TOs question whether submitting offers prior to confirming eligibility is appropriate. MISO TOs argue that

⁴⁹⁶ *Id.* at 18-19.

⁴⁹⁷ Consumers Energy Protest at 13-14.

⁴⁹⁸ DTE Electric Protest at 6-7.

⁴⁹⁹ *Id.* at 7.

⁵⁰⁰ MISO TOs Protest at 7-8.

MISO's proposal does not address how MISO will notify EDCs of third-party DERA registrations or modifications to registration applications.⁵⁰¹

256. Entergy notes that, as part of MISO's discussion of a voluntary pre-registration process, the DERA provides the EDC with information on the proposed aggregation.⁵⁰² While acknowledging that this occurs before registration, Entergy argues that there should be an obligation in the Tariff that the DERA will contact the EDC and provide it with some preliminary information on the proposed DEAR.

(2) Answers

257. MISO states that the EDC/LSE and RERRA each have a review timeline of 10 business days, after which, the EDC will have 60 days to perform its Technical Review.⁵⁰³ MISO asserts that the sequential eligibility review between the EDC/LSE and LBA and RERRA is intended to provide a standard process with certain outcomes.⁵⁰⁴ MISO contends that the EDCs/LSEs have detailed knowledge of their specific retail program offerings, which can differ significantly among the potentially numerous EDCs/LSEs under a single RERRA's jurisdiction. MISO states that this precludes the EDC/LSE and LBA and RERRA from simultaneously performing eligibility reviews. MISO avers that Order No. 2222 states that the distribution utility review timeline can be up to 60 days, and that its proposal adheres to this requirement. In response to AEMA, MISO contends that it is actively leveraging automation across planning and market business functions and will leverage appropriate technology at the time of implementation to support process efficiency.⁵⁰⁵

(3) Data Request Response

258. In the Data Request, Commission staff asked MISO to clarify the period for the EDC Technical Review. In response, MISO states that it revised the Tariff to clarify the EDC Technical Review is 60 Calendar Days and states that these revisions are consistent with Order Nos. 2222 and 2222-A.⁵⁰⁶ Further, Commission staff asked MISO to clarify

⁵⁰¹ *Id.* at 8.

⁵⁰² Entergy Protest at 16.

⁵⁰³ MISO Answer at 19-20 (citing Rauch Test. at 29-30).

⁵⁰⁴ *Id.* at 20.

⁵⁰⁵ *Id.* at 21.

⁵⁰⁶ Data Request Response at 47.

whether the EDC review is a technical or reliability review and further explain the scope of that review. In response, MISO states that EDC Technical Review is a technical review that includes evaluating potential DER reliability impacts and notes that MISO's filing used the terms technical review and reliability review interchangeably.⁵⁰⁷ MISO states that the scope could include screening or studies, depending on the specifics of the DEAR under review, and that the EDC's Technical Review or reliability review criteria for the transmission system review should be based on voltage, thermal, and protection system impacts, using standards-based approaches where possible.⁵⁰⁸

(4) Data Request Response Protest

259. AEE/SEIA contend that MISO's proposed distribution utility review process is broken out into two distinct steps: (1) the 10 business day double counting check and (2) the 60 calendar day EDC Technical Review.⁵⁰⁹ AEE/SEIA assert that the Commission did not delineate between the double counting check and the technical review when it directed the RTOs to establish a distribution utility review process that does not exceed 60 days.⁵¹⁰ AEE/SEIA state that MISO's process, by MISO's own admission, could take nearly twice as long, and the only justification MISO provides amounts to the EDCs wanting more time.⁵¹¹

(5) Answer to Data Request Response Protests

260. MISO contends that AEE/SEIA's protest fails to consider the Commission's statements in Order No. 2222 regarding the need to recognize regional differences in the design and implementation of the distribution utility review process.⁵¹² MISO states that the majority of MISO's states are retail regulated and do not provide for retail access, and that this regional difference requires EDCs/LSEs and RERRAs to perform a threshold evaluation of whether a DER is eligible to participate in an aggregation prior to initiating

⁵⁰⁷ *Id.* (citing Transmittal at 17).

⁵⁰⁸ *Id.* at 48 (citing Transmittal at 20).

⁵⁰⁹ AEE/SEIA Joint Data Request Response Protest at 10.

⁵¹⁰ *Id.* (citing Order No. 2222, 172 FERC ¶ 61,247 at P 295).

⁵¹¹ *Id.*

⁵¹² Answer to Data Request Response Protests at 11 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 296).

the 60-day EDC review process. Otherwise, MISO argues, the EDC review process could be wasted on a DER that is not eligible to participate in an aggregation.

(6) Commission Determination

261. We find that MISO's proposal complies with the requirement of Order No. 2222 to include a distribution utility review process that is triggered by initial registration of the distributed energy resource aggregation or incremental changes to a distributed energy resource aggregation already participating in the markets.⁵¹³ Pursuant to MISO's proposed Tariff revisions, "[u]pon the submission of a new or change to a DEAR for approval, the contact person(s) identified for the relevant LBA, EDC and LSE will receive notification requesting them to access the information provided and review their pending tasks."⁵¹⁴

262. In response to MISO TOs, we note that, as clarified in its Data Request Response, MISO explains that before the EDC begins its eligibility review and Technical Review, MISO takes up to 10-business days to review the Market Participant's application for completeness and would, if necessary, request additional information.⁵¹⁵ We find that MISO's proposed 10-business day review for MISO to check a DEAR's enrollment for completeness does not pose an undue barrier to entry for distributed energy resource aggregations because it ensures that the distribution utility will receive a complete submission to conduct its necessary review and that the start of the EDC Technical Review will not be unreasonably delayed.⁵¹⁶ We find that 10-business days is reasonable and balances the need to allow MISO to review DEAR enrollment for completeness while also providing DERAs with a deadline by which MISO's review should be complete. Therefore, the distribution utility review process is not triggered until the EDC/LSE and LBA receive the new or revised DEAR registration from MISO, including the DERA's complete application. Nevertheless, we encourage MISO to continue to

⁵¹³ Order No. 2222, 172 FERC ¶ 61,247 at P 292.

⁵¹⁴ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7A.iii.2.

⁵¹⁵ Data Request Response at 39-40.

⁵¹⁶ *Id.* at 40; *see* Order No. 2222, 172 FERC ¶ 61,247 at P 279.

examine whether it is possible to further shorten this review and/or automate the process.⁵¹⁷

263. In addition, we find that MISO complies with the requirement that only the distribution utility hosting a distributed energy resource has the opportunity to review the addition of that resource to a distributed energy resource aggregation.⁵¹⁸ Under MISO's proposed Tariff revisions, any initial registration of or changes to a DEAR require the DERA to inform MISO of the "EDC where the DER(s) comprising the DEAR are located, with relevant contact information."⁵¹⁹ Moreover, upon the submission of a new or change to a DEAR for approval, the contact person(s) identified for the relevant EDC will receive notification requesting them to access the information provided and review their pending tasks. The relevant EDC would be that utility where the DER(s) comprising the DEAR are located.

264. We also find that MISO's proposed review period partially complies with the requirement to provide adequate and reasonable time for distribution utility review that does not exceed 60 days.⁵²⁰ Pursuant to MISO's proposed Tariff revisions, and in response to DTE Electric, MISO has clarified that it will provide EDCs and LSEs 60 Calendar Days in total to perform a technical review of the aggregation.⁵²¹ However, MISO proposes that the EDC/LSE and LBA eligibility review component of the distribution utility review period will occur outside of this 60-day period, as discussed below.⁵²²

265. We find that MISO's proposed 10-business day EDC/LSE and LBA eligibility review to evaluate potential double counting must be completed during the 60-day period MISO proposes for the EDC Technical Review, i.e., reliability review, so that MISO

⁵¹⁷ MISO Answer at 21 ("MISO is actively leveraging automation across planning and market business functions and will leverage appropriate technology at the time of implementation to support process efficiency.").

⁵¹⁸ Order No. 2222-A, 174 FERC ¶ 61,197 at P 70.

⁵¹⁹ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.i.

⁵²⁰ Order No. 2222-A, 174 FERC ¶ 61,197 at P 72 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 295).

⁵²¹ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

⁵²² Data Request Response at 47.

complies with the requirement that the distribution utility review period be no more than 60 days.⁵²³ As discussed below, the EDC/LSE double counting review constitutes an evaluation of whether a DER is capable of participating in an aggregation and thus should be completed during the 60-day review period.⁵²⁴ We disagree with MISO that the Commission in Order No. 2222 provided flexibility in the context of the distribution utility review time period; rather, the Commission discussed flexibility in the context of the criteria that the RTOs/ISOs are directed to propose as part of that review.⁵²⁵ We also disagree with Consumers Energy's suggestion that the timeframe for the EDC/LSE double counting review should be included in the BPMs as opposed to the Tariff. Order No. 2222 explicitly required that RTOs/ISOs revise their respective tariffs to specify the time that a distribution utility has to identify concerns regarding a distributed energy resource aggregation.⁵²⁶ Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that revises the Tariff to include a distribution utility review period that does not exceed 60 days, wherein all aspects of the distribution utility's review must occur, including any double counting checks.

266. We disagree with Consumers Energy that MISO's proposed 10-business day eligibility review period for the RERRA to evaluate potential double counting should be included in the BPMs. As an initial matter, we note that Order No. 2222 requires that "any such role for [RERRAs] in coordinating the participation of distributed energy resource aggregations in RTO/ISO markets be included in the RTO/ISO tariffs."⁵²⁷ Moreover, setting forth such a timeline in the BPMs would allow this time period to be changed without Commission review, and increasing this time period could create undue

⁵²³ Order No. 2222-A, 174 FERC ¶ 61,197 at P 72 ("We grant Public Interest Organizations' request to limit the length of distribution utility review to no more than 60 days."); *see* Data Request Response at 47 ("The EDC review is a technical review that includes evaluating potential DER reliability impacts. MISO's filing used the terms technical review and reliability review interchangeably.").

⁵²⁴ Order No. 2222, 172 FERC ¶ 61,247 at P 292 (requiring RTOs/ISOs to develop a distribution utility review process by which distribution utilities would determine whether each proposed distributed energy resource is capable of participation in a distributed energy resource aggregation).

⁵²⁵ *Id.* P 296 ("However, we are not standardizing the criteria that the RTOs/ISOs must adopt. We believe there are sufficient differences among the regions, such as their rules limiting participation in different programs, to warrant flexibility in determining specific standardized criteria.").

⁵²⁶ *Id.* P 295.

⁵²⁷ *Id.* P 324.

barriers to entry for DEARs.⁵²⁸ However, given that MISO proposed that the RERRA review occur after the EDC/LSE and LBA eligibility review, and our directive above requires that the EDC/LSE and LBA eligibility review occur during the 60-day review period, we direct MISO to clarify, as part of its further compliance filing addressing the distribution utility review period, whether its proposed role for the RERRA will change, including the timing of the RERRA's eligibility review to evaluate potential double counting, and to make any necessary Tariff revisions.

267. In response to DTE Electric's concern regarding whether the EDC Technical Review will be paused pending review of potential reliability impacts because of the potential for transmission mitigations to affect distribution studies and required actions or upgrades,⁵²⁹ we find that proposed Tariff section 38.7.A.iii.2⁵³⁰ is silent on this matter. With respect to potential Transmission System impacts, the Tariff indicates that "the DEAR registration will be paused pending review of the potential reliability impacts," and MISO "will deem the registration approved upon acceptance and/or implementation of conditions resulting from the reliability review, ending the registration suspension."⁵³¹ We therefore direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing clarifying whether the EDC Technical Review can be paused, and if so, under what circumstances, as well as how the EDC Technical Review would thereafter resume, and to revise the Tariff as necessary.

⁵²⁸ *Id.* P 279 (finding that "coordination requirements should not create undue barriers to entry for distributed energy resource aggregations").

⁵²⁹ DTE Electric Protest at 7.

⁵³⁰ *Compare* MISO Proposed Tariff, Module C, § 38.7.A.iii.2 (Distributed Energy Resource Aggregators), § 38.7.A.iii.2 (32.0.0) ("If within that sixty (60) Calendar Day review, the EDC identifies a potential safety or reliability impact to the distribution system, the EDC will notify Transmission Provider and the DERA of the criteria violated and any required mitigating actions or operating limitations to the DEAR. The DERA must then communicate to the Transmission Provider their intent to proceed with those actions or limitations within ten (10) Business Days, along with any modifications to their registration."), *with id.* ("If the EDC identifies a potential reliability impact to the Transmission System within that sixty (60) Calendar Day review, the EDC will coordinate with the appropriate Transmission Owner(s) and notify the Transmission Provider and DERA of the potential transmission reliability impacts; the DEAR registration will be paused pending review of the potential reliability impacts.").

⁵³¹ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

268. We find that MISO's proposed distribution utility review process partially complies with the information sharing requirements of Order No. 2222.⁵³² We find that MISO complies with the requirement that each RTO/ISO must share with distribution utilities any necessary information and data collected about the individual distributed energy resources participating in a distributed energy resource aggregation.⁵³³ Pursuant to MISO's proposed Tariff revisions, the EDC/LSE and LBA will have access to relevant information used by MISO concerning the DEAR.⁵³⁴ In response to Entergy, we decline to require MISO to revise the Tariff to require the DERA to submit preliminary information to the EDC/LSE and LBA before registration because the EDC/LSE and LBA will receive the relevant information as part of the DEAR registration process.

269. We find that MISO's proposal partially complies with the requirement that the specific information regarding a distributed energy resource that is provided by a distribution utility to an RTO/ISO as part of the distribution utility review process be shared with the distributed energy resource aggregator.⁵³⁵ Pursuant to MISO's proposed Tariff revisions, the EDC is required to notify the DERA of the criteria violated and any required mitigating actions or operating limitations to a DEAR if the EDC identifies potential safety or reliability impacts on the distribution system.⁵³⁶ Furthermore, the EDC is required to communicate the transmission reliability impacts, including potential impacts, and any necessary upgrades or operating limitations to the DERA.⁵³⁷ However, we find that MISO has not addressed whether the EDC will share information with the

⁵³² Order No. 2222, 172 FERC ¶ 61,247 at P 292; Order No. 2222-A, 174 FERC ¶ 61,197 at P 75.

⁵³³ Order No. 2222, 172 FERC ¶ 61,247 at P 292.

⁵³⁴ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2; *see id.* (noting that such information includes, but is not limited to, resource type, effective date, termination date, CP Node name, EP Node that comprises the resource, end use customer account number(s), meter identification number(s), maximum level of participation, Measurement and Verification methodology by relevant resource type, and coincident peak dispatch information for use in Peak Load Contribution calculations); *see also* Data Request Response at 15 (explaining that MISO will provide the LSE/EDC with the information collected at the time of registration so the LSE/EDC can perform the check for double counting and dual compensation).

⁵³⁵ Order No. 2222-A, 174 FERC ¶ 61,197 at P 75.

⁵³⁶ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

⁵³⁷ *Id.*

DERA about a DER concerning eligibility (i.e., double counting) that the EDC provides to MISO as part of the EDC's review. Therefore, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing clarifying how information about a DER that is provided by an EDC to MISO as part of the distribution utility review process will be shared with the DERA.

270. We disagree with MISO TOs that a DERA could submit offers prior to completion of the initial EDC Technical Review. DERAs are subject to the same obligations as other Market Participants pursuant to section 38.2.5 of the Tariff,⁵³⁸ and as MISO clarifies in its Data Request Response, the DEAR is not allowed to participate until MISO has received all approvals.⁵³⁹ However, as discussed below with respect to modifications, we note that MISO's proposed section 38.7.A.iii.2 provides that "the DERA may continue to offer from the unmodified portion of the DEAR during reviews by the EDC, LSE and LBA," which is consistent with the requirement of Order No. 2222 that aggregators should be able to continue to bid the unmodified portion of their aggregation into RTO/ISO markets.⁵⁴⁰

271. Lastly, we find that MISO complies with the requirement in Order No. 2222 that the results of a distribution utility's review be incorporated into the distributed energy resource aggregation registration process.⁵⁴¹ In accordance with MISO's proposed Tariff revisions, if the EDC identifies a potential reliability impact to the distribution system, then "the EDC will notify [MISO] and the DERA of the criteria violated and any required mitigating actions or operating limitations to the DEAR."⁵⁴² Additionally, if the EDC identifies a potential reliability impact to the transmission system, then "the EDC will coordinate with the appropriate Transmission Owner(s) and notify [MISO] and DERA of the potential transmission reliability impacts."

⁵³⁸ MISO Proposed Tariff, Module C, § 38.2.5 (Market Participant Obligations) (49.0.0), § 38.2.5.a.iv ("Each Market Participant shall obtain and maintain all permits, licenses, or approvals required for it to participate in the Energy and Operating Reserve Markets in the manner contemplated by this Tariff.").

⁵³⁹ Data Request Response at 41.

⁵⁴⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 337. *See infra* P 369.

⁵⁴¹ Order No. 2222, 172 FERC ¶ 61,247 at P 292.

⁵⁴² MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

(b) Capability and Reliability Criteria

(1) Comments/Protests

272. Entergy argues that the Tariff should require DERAs to respond to EDC questions raised in the EDC's Technical Review of the DEAR.⁵⁴³ Entergy next contends that the coordination process that occurs after an EDC identifies a potential reliability impact is under development in the MISO stakeholder process.⁵⁴⁴

273. DTE Electric expresses concern about MISO's proposal to require the EDC to communicate the results of any transmission owner- or MISO-studies to the DERA.⁵⁴⁵ DTE Electric recommends that when a MISO or transmission owner study is required, MISO should compile the DEAR requirements and technical justifications for remediating any identified reliability impacts and communicate those results to the DERA, rather than to the EDC.⁵⁴⁶ DTE Electric explains that the EDC will not have the familiarity with the process conducted by MISO or the transmission owner needed to answer DERA questions and asserts that this will create another hurdle in the communication and decision-making process between the DERA and MISO that puts the EDC in the middle.⁵⁴⁷

274. MISO TOs contend that MISO's proposal lacks detail and transparency regarding when, and how, transmission owners will be required to perform screenings to determine if a potential reliability impact warrants further evaluation by MISO.⁵⁴⁸ MISO TOs also disagree with MISO's proposal that any transmission owner-defined technical thresholds not be more restrictive than the MISO-defined technical thresholds. MISO TOs argue that their technical evaluations therefore should be permitted to be as restrictive as necessary to reflect their unique transmission reliability concerns.

275. AEMA states that MISO has not adequately defined elements of its proposed review process such as the DEAR technical review thresholds, or the technical review

⁵⁴³ Entergy Protest at 17.

⁵⁴⁴ *Id.* 18-19.

⁵⁴⁵ DTE Electric Protest at 7.

⁵⁴⁶ *Id.* at 8.

⁵⁴⁷ *Id.*

⁵⁴⁸ MISO TOs Protest at 12.

and Affected System studies.⁵⁴⁹ AEMA argues that the Commission should require MISO to develop clear and transparent details, including as to the scope, costs, and timing of these activities, to prevent barriers to participation.⁵⁵⁰ AEMA argues that it is unclear how MISO will address market mitigation measures and system upgrades.⁵⁵¹

276. AEE/SEIA contend that MISO proposes to allow the transmission owner to determine that a MISO Reliability Review is warranted, and if it is, then MISO invoices the transmission owner \$60,000 per substation for the study, for which the transmission owner can then invoice the DER.⁵⁵² AEE/SEIA argue that placing the MISO Reliability Review outside of the EDC Technical Review, subjecting it to an ill-defined “best efforts” timeline and allowing the transmission owner the opportunity to impose a further financial cost, are barriers to DER participation in the MISO market.⁵⁵³ AEE/SEIA state that the Commission should require MISO’s Reliability Review process to occur within the 60-day EDC Technical Review period, with the study costs presented before the initial review.

277. Public Interest Organizations raise five concerns with MISO’s coordination proposal. First, Public Interest Organizations claim that MISO has not established criteria for when an EDC should raise reliability concerns to a transmission owner.⁵⁵⁴ Public Interest Organizations aver that in MISO, most utilities are vertically integrated and therefore have potential financial conflicts, particularly with third-party aggregators. Public Interest Organizations claim that MISO’s proposal creates a situation where EDCs and transmission owners have the incentive and opportunity to engage in anticompetitive behavior by delaying DEAR participation.⁵⁵⁵ Second, Public Interest Organizations argue that MISO has not created a timeline for transmission system reliability evaluations and that the “best-efforts” standard for these evaluations is vague and practically

⁵⁴⁹ AEMA Protest at 19.

⁵⁵⁰ *Id.* 19-20.

⁵⁵¹ *Id.* at 20-21.

⁵⁵² AEE/SEIA Joint Protest at 13 (citing MISO Interconnection Process Working Group, *DER Interconnection* (Feb. 7, 2022), <https://cdn.misoenergy.org/20220207%20IPWG%20Item%2004%20DER%20Interconnection622709.pdf>).

⁵⁵³ *Id.* at 13-14.

⁵⁵⁴ Public Interest Organizations Protest at 13.

⁵⁵⁵ *Id.* at 13-14.

unenforceable.⁵⁵⁶ Third, Public Interest Organizations state that MISO's proposal lacks defined thresholds that transmission owners will use to determine if MISO needs to further study a project.⁵⁵⁷ Public Interest Organizations argue that MISO gives little indication as to what the thresholds will be or how they will be implemented and that the lack of clarity and transparency leaves too much to the stakeholder process. Fourth, Public Interest Organizations argue that MISO does not provide any information on what criteria it will use in its Affected System studies to determine project impacts beyond "[i]n general" evaluating "voltage, thermal, and protection system impacts, using standards-based approaches where possible."⁵⁵⁸ Public Interest Organizations state that MISO has provided little guidance on how it will evaluate projects or when it will complete evaluations. Public Interest Organizations contend that the Commission should require MISO to develop criteria for MISO Reliability Reviews.⁵⁵⁹ Finally, Public Interest Organizations also argue that the Commission should require MISO to provide its actual cost of system studies and to justify the cost and the need for a \$60,000 deposit for each study group by substation, which they contend MISO presented to the IPWG but fails to mention in its compliance filing.⁵⁶⁰

278. Ameren asserts that costs incurred by retail customers as part of the EDC Technical Review process should be allocated to and recovered from the DERA.⁵⁶¹ Ameren argues that the EDC should not have to negotiate cost recovery of its services with each DERA. Ameren explains that the EDC has no contractual relationship with the DERA and that state rules for oversight and management of the DERA have not been considered. Ameren suggests that MISO should include a provision in its Tariff to recover such costs from the DERA based on cost causation, even if it is a rebuttable presumption.⁵⁶² Ameren also states that it agrees with MISO that costs for system

⁵⁵⁶ *Id.* at 14.

⁵⁵⁷ *Id.* at 15.

⁵⁵⁸ *Id.* at 16 (quoting Transmittal at 21).

⁵⁵⁹ *Id.*

⁵⁶⁰ *Id.* at 16-17 (citing MISO Interconnection Process Working Group, *DER Interconnection*, (Feb. 7, 2022), <https://cdn.misoenergy.org/20220207%20IPWG%20Item%2004%20DER%20Interconnection622709.pdf>).

⁵⁶¹ Ameren Protest at 6.

⁵⁶² *Id.* at 6-7.

upgrades stemming from DEAR participation should be allocated to the DERA consistent with cost causation principles.⁵⁶³

279. Entegrity objects to MISO's proposal that costs of system upgrades stemming directly from DEAR operation (i.e., not legacy DER issues) follow cost-causation principles, with the DERA having responsibility for DEAR-caused costs across the electric system.⁵⁶⁴ Entegrity asserts that the effect of this proposal would require DEARs to subsidize the costs of upgrades that may ultimately benefit other generation resources and enhance the reliability of the electric grid. Entegrity proposes that the costs of system upgrades be allocated on a capacity basis. Entegrity contends that the intent of Order No. 2222 is to remove barriers to the participation of DERAs in MISO's capacity, energy, and ancillary services markets and that DERAs should not be required to pay more than their fair share of system upgrade costs.⁵⁶⁵

280. MISO TOs state that cost-causation principles and cost recovery need to consider initial costs as well as ongoing costs, including future capacity or reliability improvements by the EDC that would not be required but for the participation of DEARs in wholesale markets.⁵⁶⁶

(2) Data Request Response

281. In the Data Request, Commission staff requested information regarding the criteria by which EDCs would determine whether each proposed DER is capable of participation in a DEAR. In response, MISO states that section 38.7.A of the Tariff contains criteria relating to double counting.⁵⁶⁷ MISO explains that the EDC/LSE will review the aggregation to ensure all proposed assets are eligible for the proposed wholesale compensation and are not otherwise compensated for these same wholesale services at retail. MISO notes potential criteria used in the EDC/LSE and LBA eligibility review from section 38.7.A.i as follows: (1) confirm that the load associated with the DEAR is served by the LSE listed in the registration; (2) confirm that the DER comprising the DEAR interconnect with the registered EDC distribution system; (3) confirm the applicable RERRA for the DER; (4) confirm that the DER in the DEAR is located in the

⁵⁶³ *Id.* at 6.

⁵⁶⁴ Entegrity Protest at 4 (citing Transmittal at 22).

⁵⁶⁵ *Id.* at 4-5.

⁵⁶⁶ MISO TOs Protest at 8.

⁵⁶⁷ Data Request Response at 48.

registered LBA Area; (5) verify the account number is applicable to the DER; and (6) verify the reasonableness of the maximum level of participation for each DER.

282. In the Data Request, Commission staff requested information regarding the criteria by which EDCs would determine that the participation of each proposed DER in a DEAR will not pose significant risks to the reliable and safe operation of the distribution system. MISO states that, although distribution system reliability is outside of MISO's jurisdiction, MISO proposed that the EDC look to typical industry technical criteria, such as thermal, voltage, and protection system impacts, to evaluate whether proposed DEAR pose significant risks to the reliable and safe operation of the distribution system.⁵⁶⁸

283. In the Data Request, Commission staff asked MISO to explain why the Tariff specifies that the results of the transmission system reliability impact review be communicated to the DERA within five business days from the completion of the review, rather than as soon as the review is completed. In response, MISO states that it proposed a short timeframe to account for any transmission owner business processes involved in communicating results, which may fall outside of the actual transmission system reliability impact review.⁵⁶⁹

284. In the Data Request, Commission staff also requested MISO to describe how the transmission owner and MISO transmission system reliability impact reviews differ from one another and are not duplicative, including the scope and analyses used. In response, MISO states that the two reviews differ in the level of technical complexity and rigor based on need and purpose of each review.⁵⁷⁰ MISO states that the initial review by the transmission owner is a coarser, initial analysis to quickly approve DEAR that do not pose system reliability impacts. MISO states that MISO's review is a more granular MISO Affected Systems study for evaluating "DEAR with potential impacts."

285. In the Data Request, Commission staff asked MISO to explain why the transmission owner and MISO Reliability Review processes may be completed within the maximum 60-day EDC review period. In response, MISO states that the transmission owner and MISO Reliability Review may not be needed, or may entail simple screening, which could be completed within the maximum 60-day EDC review period.⁵⁷¹

⁵⁶⁸ *Id.* at 48-49 (citing Transmittal at 20).

⁵⁶⁹ *Id.* at 51.

⁵⁷⁰ *Id.*

⁵⁷¹ *Id.* at 49.

286. In the Data Request, Commission staff also requested MISO to explain why MISO's proposal does not establish a fixed amount of time for the transmission owner and MISO to perform their respective transmission system Reliability Reviews. In response, MISO states that EDC and RERRA DER processes were reviewed as an input to MISO's technical review proposal.⁵⁷² MISO states that since distribution interconnection processes sometimes leave open timeframes for transmission impact studies and Affected System studies, MISO deemed it appropriate to similarly address EDC Technical Reviews.⁵⁷³

287. Further, in the Data Request, Commission staff asked MISO to explain why its proposal that such Reliability Reviews be conducted on a "best-efforts basis" without a firm deadline complies with the Order No. 2222 requirement that coordination requirements should not create undue barriers to entry for distributed energy resource aggregations. MISO suggests that transmission-level Reliability Reviews will be exceedingly rare given MISO's experience of DER interconnections posing limited impacts to the transmission system and the limited potential for the aggregations to cause new impacts.⁵⁷⁴ MISO states that its proposal aligns with some current RERRA interconnection transmission process timeframes and would not create undue barriers to entry for DERs that pose transmission impacts. MISO notes that it does not always fully control study timeframes, especially where information or analysis from other parties is required to complete the analysis or where the initial scope is not known. MISO acknowledges that the Generator Interconnection Procedures require MISO to use "Reasonable Efforts" to complete studies within established timeframes and MISO's proposal to use "best efforts" meets or exceeds the standards that MISO applies to its own interconnection customers and when performing Affected Systems studies.⁵⁷⁵ MISO contends that a requirement to use "best efforts" cannot be an undue burden because it requires MISO to do the best that it can do. MISO further notes that memorializing the best-efforts standards in the Tariff creates an enforceable obligation.

288. In the Data Request, Commission staff also asked how MISO's and/or transmission owners' transmission system Reliability Reviews of DEARs are similar to or different from transmission system reliability studies performed for other resources participating in MISO. MISO states that the proposed DEAR transmission owner and MISO processes differ from transmission-connected resources in that DEAR reviews

⁵⁷² *Id.*

⁵⁷³ *Id.* at 50.

⁵⁷⁴ *Id.*

⁵⁷⁵ *Id.* (citing MISO Tariff, attach. X, (158.0.0), § 1 (Definitions)—Reasonable Efforts; *id.* §§ 2.2, 7.3.1.3, 7.3.2, 7.3.3.3).

more closely follow an Affected System study approach whereas transmission-connected resources follow MISO's Definitive Planning Phase queue process outlined in Attachment X of the Tariff.⁵⁷⁶ MISO proposes to perform only voltage and thermal analysis for DER whereas transmission-connected resources also undergo dynamics studies as a standard business practice.⁵⁷⁷ MISO views the technical differences between DER and transmission-connected resources to be sound justification for the difference in study practices.

289. In the Data Request, Commission staff asked MISO to identify where MISO's proposal with respect to the quarterly MISO Reliability Reviews is discussed in the Tariff. MISO states that its proposed quarterly review process does not require Tariff modifications.⁵⁷⁸ MISO states that the proposed quarterly review process mirrors several other Affected System study processes which are considered business practices and are not processes set forth in the Tariff.

290. In the Data Request, Commission staff asked MISO to explain how its proposal to perform quarterly transmission system Reliability Reviews of DEARs that are referred to MISO by transmission owners will not unnecessarily delay the registration of a DEAR and complies with the Order No. 2222 requirement that coordination requirements should not create undue barriers to entry for distributed energy resource aggregations. In response, MISO reiterates that many EDC Technical Reviews could begin and end at the EDC level after a preliminary screen is complete, assuming no impacts on either the distribution system or the transmission system are identified.⁵⁷⁹ MISO states that the Commission's Generator Interconnection Notice of Proposed Rulemaking proposes a 90-day timeframe from Affected System study agreement execution to report delivery, which is similar to MISO's DER quarterly Reliability Review proposal. MISO further notes that MISO's transmission interconnection process in Attachment X of the Tariff also uses grouped-project cycles to manage the process. MISO argues that it is not practical for MISO to kick-off DER studies on an "as-requested" basis and that its timeframes are appropriate and necessary for reviewing transmission system impacts.

291. In the Data Request, Commission staff asked MISO to explain the maximum amount of time that could elapse between a transmission owner's referral to MISO and MISO's commencement of its transmission system Reliability Review. In response, MISO states that if a DEAR review misses the cutoff date for a quarterly review cycle,

⁵⁷⁶ *Id.* at 51.

⁵⁷⁷ *Id.* at 52.

⁵⁷⁸ *Id.*

⁵⁷⁹ *Id.*

and it required a MISO review, the DEAR could wait 90 days to enter the next review.⁵⁸⁰ MISO states that, similar to activities surrounding MISO's transmission-connected Definitive Planning Phase process, MISO anticipates that Market Participants will be aware of important cutoff dates when planning and conducting business activities.

292. In the Data Request, Commission staff asked whether, and if so where, in the Tariff MISO requires the EDC to communicate to the DERA the specific EDC Technical Review or EDC/LSE and LBA eligibility review criteria violated and mitigations uncovered during the analysis when the EDC determines DEAR operation will result in adverse safety or reliability impacts on the distribution system. In response, MISO states that the requirement for EDCs to communicate mitigations is contained in section 38.7 of the Tariff.⁵⁸¹ MISO states that this requirement would be placed into BPM procedures pursuant to section 38.7.A.iii.2 of the Tariff, which states: "If within that sixty (60) Business Day review, the EDC identifies a potential safety or reliability impact to the distribution system, the EDC will notify [MISO] and the DERA of any required mitigating actions or operating limitations to the DEAR." As part of its Data Request Response, MISO proposes to further revise section 38.7.A.iii.2 to also require the EDC to communicate "the criteria violated" to the DERA.⁵⁸²

(3) Commission Determination

293. We find that MISO's proposal partially complies with the requirement to include criteria in its Tariff by which the distribution utilities will determine whether each proposed distributed energy resource is capable of participating in a distributed energy resource aggregation.⁵⁸³ Specifically, MISO proposes to require that "the LSE or EDC will coordinate with relevant parties to assist in the review of information provided to determine whether any [DER(s)] within the proposed or modified aggregation are currently registered to provide the same service in the Transmission Provider's markets as part of an existing resource, or enrolled to provide the same service at retail, as set forth in the [BPM]."⁵⁸⁴ We find that MISO's proposal is sufficiently specific and

⁵⁸⁰ *Id.* at 53.

⁵⁸¹ *Id.*

⁵⁸² MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

⁵⁸³ Order No. 2222, 172 FERC ¶ 61,247 at PP 292, 296.

⁵⁸⁴ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.ii; Data Request Response at 48 ("MISO includes criteria in Tariff Section 38.7(A) as discussed in the double counting questions.").

transparent and will allow EDCs to review and identify concerns regarding the ability of DERs to participate in a DEAR.

294. However, we note that, in its Data Request Response, MISO suggests that there are “[p]otential EDC eligibility checks” in Tariff section 38.7.A.i, in addition to the double counting review discussed above.⁵⁸⁵ We clarify that this Tariff section does not contain any criteria by which the EDCs will determine whether each proposed DER is capable of participating in a DEAR. Further, Tariff section 38.7.A.ii states that “[MISO] will provide LBAs and EDCs with access to the physical location and magnitude of each resource registered by an DERA to perform an eligibility review.”⁵⁸⁶ We find that physical location and magnitude do not themselves constitute capability criteria because they do not include a principle or standard by which an EDC would determine whether each proposed DER is capable of participation in a DEAR. Physical location and magnitude are arguably just information that an EDC could review and verify. It is unclear how the EDC will use physical location and magnitude in its eligibility review, and we therefore find their inclusion is inconsistent with the requirement of Order No. 2222 that the review process be transparent and provide specific criteria.⁵⁸⁷ Therefore, to the extent MISO proposes to include additional eligibility criteria beyond those related to the double counting review, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that revises its Tariff as necessary to include specific, transparent criteria by which an EDC will determine during its review whether each proposed DER is capable of participating in a DEAR and to explain why these criteria are appropriate for the MISO region, as required by Order No. 2222.

295. We find that MISO’s proposal partially complies with the requirement to develop a distribution utility review process that includes criteria by which the distribution utilities will determine whether the participation of each proposed distributed energy resource in a distributed energy resource aggregation will not pose significant risks to the reliable and safe operation of the distribution system.⁵⁸⁸ We find that MISO’s proposal appropriately allows EDCs to determine whether the participation of each proposed DER within a DEAR will pose significant risks to the reliable and safe operation of the

⁵⁸⁵ Data Request Response at 48.

⁵⁸⁶ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.ii.

⁵⁸⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 293; *see* PJM Compliance Order, 182 FERC ¶ 61,143 at P 307.

⁵⁸⁸ Order No. 2222, 172 FERC ¶ 61,247 at P 292.

distribution system.⁵⁸⁹ As to MISO's criteria, Order No. 2222 recognizes that there are sufficient differences among regions to warrant flexibility in determining specific standardized criteria.⁵⁹⁰ As MISO explains, it is not in a position to dictate the specific evaluation criteria to be considered by the EDC because MISO lacks the authority to do so.⁵⁹¹ We find that MISO's proposal provides appropriate deference to the EDC's assessment of the impact of the DERA's registration on the safety and reliability of distribution facilities.

296. We find, however, that MISO does not address the scope of such review criteria. The Commission clarified in Order No. 2222-A that, when the Commission found that RTOs/ISOs must include potential impacts on distribution system reliability as a criterion in the distribution utility review process, these potential impacts specifically refer to any incremental impacts from a resource's participation in a distributed energy resource aggregation that were not previously considered by the distribution utility during the interconnection study process for that resource.⁵⁹² We find that, to demonstrate compliance with the requirement to include potential impacts on distribution system reliability as a criterion in the distribution utility review process, MISO must propose language in its Tariff clarifying that the scope of distribution utility review is limited to any incremental reliability or safety impacts that the utility has not previously considered. While MISO's transmittal states that "[t]he [EDC] Technical Review should target DER impacts that were not initially accounted for during interconnection evaluation,"⁵⁹³ MISO's proposal does not include Tariff language that limits EDC Technical Review to any incremental impacts from a resource's participation in a DEAR that were not previously considered by the EDC during the interconnection study process for that

⁵⁸⁹ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2 ("If within that sixty (60) Calendar Day review, the EDC identifies a potential safety or reliability impact to the distribution system, the EDC will notify Transmission Provider and the DERA of the criteria violated and any required mitigating actions or operating limitations to the DEAR.").

⁵⁹⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 296. *See* CAISO Compliance Order, 179 FERC ¶ 61,197 at P 207; NYISO Compliance Order, 179 FERC ¶ 61,198 at P 267; PJM Compliance Order, 182 FERC ¶ 61,143 at P 313.

⁵⁹¹ Data Request Response at 48.

⁵⁹² Order No. 2222-A, 174 FERC ¶ 61,197 at P 79 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 297).

⁵⁹³ Transmittal at 17.

resource.⁵⁹⁴ Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that revises the Tariff to clarify that the scope of the EDC reliability review is limited to any incremental impacts from a resource's participation in a DEAR that were not previously considered by the distribution utility during the interconnection study process for that resource.

297. We find that MISO complies with the requirement in Order No. 2222 that the distribution utility have the opportunity to request that the RTO/ISO place operational limitations on an aggregation, or removal of a distributed energy resource from an aggregation based on specific significant reliability or safety concerns that the distribution utility clearly demonstrates to the RTO/ISO and distributed energy resource aggregator, on a case-by-case basis, and with the related requirement that the distribution utility provide a showing that explains any reliability findings.⁵⁹⁵ Pursuant to MISO's proposed Tariff revisions, if the EDC identifies a potential safety or reliability impact to the distribution system, the EDC must notify MISO and the DERA of the criteria violated and any required mitigating actions or operating limitations to the DEAR, and the DERA must then inform MISO of its intent to proceed with those actions or limitations, along with any modifications to the DEAR registration.⁵⁹⁶ As clarified in its Data Request Response, MISO expects written communications from the EDC to the DERA when specific review criteria and mitigations are uncovered during the analysis.⁵⁹⁷

298. We note that, as part of MISO's market rules on coordination, MISO proposes transmission owner and MISO Reliability Reviews, which occur subsequent to the EDC Technical Review when a potential reliability impact to the transmission system is identified by the EDC.⁵⁹⁸ As part of these Reliability Reviews, MISO proposes that the transmission owner perform a screen to determine if the potential reliability impact

⁵⁹⁴ See MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2 ("If within that sixty (60) Calendar Day review, the EDC identifies a potential safety or reliability impact to the distribution system, the EDC will notify Transmission Provider and the DERA of the criteria violated and any required mitigating actions or operating limitations to the DEAR.").

⁵⁹⁵ Order No. 2222, 172 FERC ¶ 61,247 at P 297; Order No. 2222-A, 174 FERC ¶ 61,197 at P 76.

⁵⁹⁶ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

⁵⁹⁷ Data Request Response at 53.

⁵⁹⁸ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

warrants further evaluation by MISO. As discussed further below, we find that these Reliability Reviews partially comply with Order No. 2222.

299. Protesters raise concerns regarding MISO's proposal that the timeline/standard applied to transmission owner and MISO Reliability Reviews is an undue barrier to DER participation. However, we are unable to assess whether this aspect of MISO's proposal complies with Order No. 2222 because it is unclear what timeline/standard MISO is applying to transmission owner and MISO Reliability Reviews. In its filing, MISO proposes that such reviews proceed on a "reasonable efforts" basis, consistent with how certain state DER interconnection procedures handle Affected Systems, while also noting that MISO expects these process timelines will be carried out on a "best-efforts" basis, with results communicated to the DERA within five business days from the completion of the review.⁵⁹⁹ In its Data Request Response, MISO instead refers to the "best efforts" standard in its Tariff creating an enforceable obligation that meets or exceeds the reasonable efforts standard.⁶⁰⁰ Further, neither standard appears to be in the proposed Tariff language. Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that explains what timeline/standard it is proposing to apply to transmission owner and MISO Reliability Reviews and identifies where it exists in the Tariff.

300. Public Interest Organizations contend that MISO must include criteria in the Tariff for review of transmission system impacts and MISO TOs propose that transmission owners be allowed to have more restrictive Reliability Review criteria than MISO. Order No. 2222 recognizes that RTOs/ISOs may study the impact of an aggregation as a whole on the transmission system⁶⁰¹ but does not require the RTOs/ISOs to establish specific criteria for such studies. Given this, we decline to require MISO to adopt MISO TOs' proposal. However, Order No. 2222 does require that coordination requirements should not create undue barriers to entry for distributed energy resource aggregations, which as discussed further below requires MISO to provide details about the Reliability Review processes it proposes.⁶⁰²

301. As MISO revises its Reliability Review requirements in its Tariff and BPMs, as discussed below, we encourage MISO to work with the MISO TOs and stakeholders to ensure that coordination requirements should not create undue barriers to entry for

⁵⁹⁹ Transmittal at 19-21.

⁶⁰⁰ Data Request Response at 50-51.

⁶⁰¹ Order No. 2222, 172 FERC ¶ 61,247 at P 99.

⁶⁰² See *infra* P 304.

DEARs.⁶⁰³ We disagree with DTE Electric's concern about the burdens involved with the EDC communicating the results of the transmission owner or MISO Reliability Reviews to the DERA. Proposed Tariff section 38.7.A.iii.2 requires MISO to coordinate with the transmission owner and EDC to identify the extent of transmission reliability impacts and any necessary upgrades or operating limitations required for DEAR participation. Therefore, MISO has an obligation to share relevant information with the transmission owner and the EDC, so that the EDC can communicate the results to the DERA in coordination with the transmission owner. We believe MISO's duty to inform the EDC, as well as the transmission owner's role in communicating the results to the DERA along with the EDC, avoids unduly burdening the EDC.

302. In response to AEMA's arguments regarding mitigation measures and system upgrades, we find that, under proposed Tariff section 38.7.A.iii.2, MISO's role and responsibilities regarding the resolution of identified transmission system reliability impacts are clearly established, and therefore we find that they do not create undue barriers to entry for DEARs, and more narrowly defined responsibilities for the other parties may be reserved for the BPMs.⁶⁰⁴

303. Finally, in response to Entergy's argument that the DERA should be required to respond to EDC questions during Technical Review, we decline to direct MISO to revise the Tariff to include such a requirement because Order No. 2222 includes no such requirement. Moreover, the DERA is incentivized to respond to the EDC to receive approval in a timely manner. In response to Ameren's argument regarding recovering the cost of the EDC Technical Review from retail customers, we find that rules addressing retail rates should be established by the RERRA and should not be set forth in the Tariff.

304. However, we find that MISO's proposed transmission owner and MISO Reliability Reviews do not fully comply with the requirement of Order No. 2222 that

⁶⁰³ See Order No. 2222, 172 FERC ¶ 61,247 at P 279; *see also infra* P 301.

⁶⁰⁴ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2 ("The EDC, in coordination with the Transmission Owner, will communicate the transmission reliability impacts and any necessary upgrades or operating limitations to the DERA within five (5) Business Days of completing the reliability impacts review. The DERA shall communicate to [MISO], Transmission Owner, and EDC their intent to proceed within 10 Business Days, including any operational conditions or system upgrades the DERA will accept. [MISO] will deem the registration approved upon acceptance and/or implementation of conditions resulting from the reliability review, ending the registration suspension. The tasks to be performed by the LSE, EDC, Transmission Owner, and/or LBA shall be set forth in the [BPMs]."); Order No. 2222, 172 FERC ¶ 61,247 at P 279.

coordination requirements should not create undue barriers to entry for distributed energy resource aggregations.⁶⁰⁵ More generally, we find that MISO's proposed transmission owner and MISO Reliability Review processes may create undue barriers to entry for DEARs, given the lack of specificity in the Tariff regarding these requirements and how they may affect the eligibility of DEARs to participate in MISO, as several protesters note. The Tariff states that "[i]f the EDC identifies a potential reliability impact to the Transmission System within that sixty (60) Calendar Day review, the EDC will coordinate with the appropriate Transmission Owner(s) and notify [MISO] and DERA of the potential transmission reliability impacts."⁶⁰⁶ However, the Tariff does not explain what this coordination entails and lacks detail on these reviews. For example, the Tariff does not specify that MISO intends for transmission owners to first conduct a pre-screen to determine whether there is a reliability concern that needs to be elevated to MISO for MISO to conduct its own review of all such identified reliability issues on a quarterly basis.⁶⁰⁷ In addition, the Tariff does not include any details about the Reliability Review processes, which MISO states it is currently developing through the ongoing IPWG stakeholder process.⁶⁰⁸ Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that revises the Tariff to include more detail on the transmission owner and MISO Reliability Review processes.

305. Similarly, we note Public Interest Organizations' and AEE/SEIA's claims that there may be barriers associated with the costs for studies that MISO conducts as part of its Reliability Review, including study deposits.⁶⁰⁹ MISO's proposal does not address costs of Reliability Review studies. As an initial matter, we decline to require MISO to provide the DERA with final, actual study costs prior to commencement of the studies to be conducted by MISO because such costs may vary. However, we note that Order No. 2222 states that coordination requirements should not create undue barriers to entry for

⁶⁰⁵ Order No. 2222, 172 FERC ¶ 61,247 at P 279.

⁶⁰⁶ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2.

⁶⁰⁷ Transmittal at 19-21.

⁶⁰⁸ *Id.*

⁶⁰⁹ AEE/SEIA Joint Protest at 13-14; Public Interest Organizations Protest at 16-17. See MISO, Interconnection Process Working Group, *DER Interconnection*, 9 (Feb. 7, 2022), <https://cdn.misoenergy.org/20220207%20IPWG%20Item%0DER%20Interconnection622709.pdf> ("MISO invoices the Utility \$60,000 as a standard deposit for each study group by substation, no later than 10 business days after receiving information.").

distributed energy resource aggregations.⁶¹⁰ We therefore require MISO to file, within 60 days of the date of issuance of this order, a further compliance filing clarifying whether it will require study deposits for Reliability Review studies that MISO conducts as part of its Order No. 2222 coordination rules, and if so, where this requirement is documented. If MISO will require such deposits, we direct MISO to explain how this would not create undue barriers to entry for distributed energy resource aggregations, as required by Order No. 2222.

306. In addition, with respect to Entegri's arguments regarding the allocation of upgrade costs associated with Reliability Reviews based on cost-causation principles,⁶¹¹ we note that MISO does not include any specific proposal related to the allocation of such costs.⁶¹² We find that the rules related to cost allocation associated with upgrades identified in Reliability Reviews may create undue barriers to entry for DEARs, given the lack of specificity in the Tariff regarding these requirements and how they may affect the eligibility of DEARs to participate in MISO. We therefore require MISO to file, within 60 days of the date of issuance of this order, a further compliance filing clarifying whether it will establish any rules related to cost allocation associated with upgrades identified in Reliability Reviews, and if so, where such rules are documented. If MISO will establish such rules, we direct MISO to explain how such rules would not create undue barriers to entry for distributed energy resource aggregations, as required by Order No. 2222.

(c) Dispute Resolution

(1) Comments/Protests

307. Indiana Commission states that MISO recognizes that a variety of disputes will occur related to DER aggregation wholesale market participation and that such disputes are best handled by the RERRA.⁶¹³ Indiana Commission asserts that DERAs and DEARs, composed of one or more individual DERs interconnected to state regulated distribution systems, fall under the definition of public utilities in Indiana and in other jurisdictions, and thus fall squarely under the jurisdiction of those commissions in matters

⁶¹⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 279.

⁶¹¹ Entegri Protest at 4-5.

⁶¹² See Transmittal at 22 ("In the case where system upgrades are needed, however, MISO proposes that costs of system upgrades stemming directly from DEAR operation (i.e., not legacy DER issues) follow cost-causation principles, with the DERA having responsibility for DEAR-caused costs across the electric system.").

⁶¹³ Indiana Commission Comments at 9.

outside of the FPA. Indiana Commission contends that disputes arising under applicable tariffs, agreements, and operating procedures of the EDC, and/or the rules and regulations of any RERRA, are rightly before the RERRAs. Indiana Commission states that because MISO has no expertise or operational vision into the planning and operation of distribution systems, disputes arising from the EDC's assessment of the real-time or prospective impacts of aggregations on its systems, and responsive actions, are rightly heard before the appropriate RERRA. Illinois Commission notes that the DERA and the EDC may disagree over the technical review's results and recommendations and that some of these disputes will inevitably become the responsibility of RERRAs to settle.

308. MISO TOs question whether disputes about the EDC/LSE and LBA eligibility review and EDC Technical Review processes should be handled by the states and not under the Tariff.⁶¹⁴ OMS states that disputes regarding matters under state jurisdiction should be adjudicated at the state level.⁶¹⁵ Specifically, OMS asserts that disputes regarding the outcome of EDC decision points may not necessarily fall under MISO's authority, such as: (1) any voluntary pre-registration process created by the RERRA; (2) the compatibility check and technical review during DER aggregation registration; and (3) disputes regarding EDC overrides.⁶¹⁶ OMS avers that each of these issues represent areas where the RTO and/or the Commission may lack the necessary jurisdiction and expertise to adjudicate disputes.

309. Entergy argues that MISO's proposed dispute resolution procedures require amendment, specifically arguing that a DERA should have an obligation, not discretion, to try to resolve an objection with the EDC, LSE, or LBA as to the accuracy of information provided during registration.⁶¹⁷ Entergy also contends that it is impractical for MISO to propose to review the participation of a DERA in MISO's markets when the DERA's settlements are successfully disputed more than 10% of the time by a relevant LSE.⁶¹⁸ Entergy anticipates that disputes about DEAR settlements are likely to involve small amounts of money, and it notes that MISO, LSEs, and LBAs have limited human capital to monitor DEARs.

⁶¹⁴ MISO TOs Protest at 11.

⁶¹⁵ OMS Protest at 14-15.

⁶¹⁶ *Id.* 15.

⁶¹⁷ Entergy Protest at 18-19.

⁶¹⁸ *Id.* at 20.

(2) Answers

310. MISO states that if the addition or rejection of a DER from participating in a DEAR results in a dispute, those disputes are best handled by the RERRA.⁶¹⁹ MISO also states that if such a dispute is not resolved, section 12 of the Tariff allows for resolution of disputes involving the coordination or application of the EDC/LSE and LBA eligibility review and Technical Review processes related to DEAR registration and enrollment.

(3) Commission Determination

311. We find that MISO's proposal partially complies with the requirement of Order No. 2222 that each RTO/ISO revise its tariff to incorporate dispute resolution provisions as part of its proposed distribution utility review process.⁶²⁰

312. MISO proposes to revise section 12 of the Tariff to provide that "any dispute regarding the coordination or application of the [EDC] review process relating to DERA registration and enrollment, except those expressly set out in [section 12] shall be resolved in accordance with the provisions of Attachment HH (Dispute Resolution Procedures) of this Tariff."⁶²¹ This Tariff language conflicts with MISO's explanation of its proposal, which states that "[i]f the addition or rejection of a DER(s) results in a dispute, those disputes are best handled by the RERRAs."⁶²² We do not expect MISO to resolve issues that are beyond its authority, and we therefore agree with MISO TOs that some disputes related to the EDC/LSE and LBA eligibility review and EDC Technical Review processes should not be resolved by MISO.⁶²³ Nevertheless, some disputes may

⁶¹⁹ MISO Answer at 18.

⁶²⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 299.

⁶²¹ The disputes specific to DERAs and DERs that are not subject to Attachment HH include: (e) Disputes involving DERAs that are not part of the [EDC] review process and not otherwise specifically permitted under the Tariff; and (f) Disputes relating to the interconnection of a DER with an EDC, except disputes regarding the potential impact of such interconnection, of the impact of a DEAR, on the Transmission System. MISO Proposed Tariff, Module A, § 12.f (Dispute Resolution Procedures) (33.0.0).

⁶²² MISO Answer at 18; *see* Transmittal at 27 ("MISO recognizes in its proposal that disputes between the DERA and EDCs may best be handled by the RERRA.").

⁶²³ *See* NYISO Compliance Order, 179 FERC ¶ 61,198 at P 274 ("However, as to disputes over the substantive determinations that Distribution Utilities make about reliability and safety on the distribution system, parties must resolve such specific disputes before the state or local regulator, not before NYISO.").

fall within MISO's authority. For example, Order No. 2222-A noted specifically that there could be disputes about information sharing during distribution utility review that could be appropriately resolved using RTO/ISO dispute resolution procedures.⁶²⁴

Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that (1) clarifies how MISO will resolve disputes that it determines are within its authority and subject to its Tariff and (2) revises the Tariff as necessary, consistent with such clarification.

313. We note Entergy's argument that it is unreasonable for MISO to review DERA participation when the DERA's settlements are successfully disputed more than 10% of the time by a relevant LSE.⁶²⁵ MISO does not respond to this argument. We note that, pursuant to section 38.6 of the Tariff, MISO currently uses a 10% threshold for successful disputes by a relevant LSE as a basis for requiring MISO to review ARC participation in MISO's markets.⁶²⁶ Order No. 2222 requires that "each RTO/ISO should describe how existing dispute resolution procedures are sufficient or, alternatively, propose amendments to its procedures or new dispute resolution procedures specific to this subject."⁶²⁷ We find that MISO has not described how applying its existing dispute resolution procedures for ARC participation to DERA participation is sufficient. We therefore direct MISO to file, within 60 days of the date of issuance of this order, a

⁶²⁴ Order No. 2222-A, 174 FERC ¶ 61,197 at P 75; *see* CAISO Compliance Order, 179 FERC ¶ 61,197 at P 212 ("CAISO has not demonstrated how its proposal prohibiting the use of its dispute resolution procedures would appropriately address disputes not related to double counting or interconnection, *such as timing of review and the transparency of the process.*") (emphasis added); ISO-NE Compliance Order, 182 FERC ¶ 61,137 at P 220 (noting as subjects within ISO-NE's authority to address "timing of review, the transparency of the distribution utility review process, and the distribution utility's fulfillment of the Order No. 2222 requirement to provide a showing as necessary to support reliability findings").

⁶²⁵ Entergy Protest at 20; MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (31.0.0), § 38.7.D ("The Transmission Provider shall review the participation of [a] DERA in the Energy and Operating Reserve Markets when the DERA's settlements are successfully disputed more than ten percent (10%) of the time by a relevant LSE.").

⁶²⁶ MISO Tariff, Module C, § 38.6 (Aggregators of Retail Customers) (34.0.0), § 38.6.D.i ("The Transmission Provider shall review the participation of an ARC in the Energy and Operating Reserve Markets when the ARC's settlements are successfully disputed more than ten percent (10%) of the time by a relevant LSE.").

⁶²⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 299.

further compliance filing that describes how this proposal is sufficient, or, alternatively, proposes amendments to its procedures or new dispute resolution procedures specific to this subject.

314. In addition, we decline Entergy's request to direct MISO to require the DERA to attempt to resolve information-related objections with the EDC, LSE, or LBA. Order No. 2222 does not include such a requirement. Moreover, MISO proposes that: "[i]f the EDC, LSE or LBA objects to the accuracy of relevant information provided in a new or updated DEAR registration, then the DERA *may* work with the relevant EDC, LSE or LBA to resolve the objection and re-submit the registration for the appropriate deadline."⁶²⁸ We believe that the DERA has strong incentives to engage with the EDC, LSE, and/or LBA to resolve an objection in order to successfully register to participate in MISO's markets, which should mitigate Entergy's concerns. We also note that, as described above,⁶²⁹ MISO proposes to expressly carve certain disputes out of its proposal and thus to prohibit the use of its dispute resolution procedures in such instances: "[d]isputes involving DERAs that are not part of the [EDC] review process and not otherwise specifically permitted under the Tariff"; and "[d]isputes relating to the interconnection of a DER with an EDC, except disputes regarding the potential impact of such interconnection, of the impact of a DEAR, on the Transmission System." We find that MISO's proposed carveouts are compliant with Order No. 2222 because the Commission declined to exercise jurisdiction over interconnections of distributed energy resources to distribution facilities for the purpose of participating in RTO/ISO markets exclusively through an aggregation and established a dispute resolution requirement in Order No. 2222 in the context of coordination.⁶³⁰ However, as discussed above, we direct MISO to submit a further compliance filing to clarify and revise as necessary the proposed Tariff language: "disputes regarding the potential impact of such interconnection, of the impact of a DEAR, on the Transmission System."⁶³¹

c. Ongoing Operational Coordination

315. To implement section 35.28(g)(12)(ii)(g) of the Commission's regulations, in Order No. 2222, the Commission required each RTO/ISO to revise its tariff to (1) establish a process for ongoing coordination, including operational coordination, that addresses data flows and communication among itself, the distributed energy resource

⁶²⁸ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), §38.7.A.iii.2 (emphasis added).

⁶²⁹ See *supra* Part IV.B.1.a.; note 620.

⁶³⁰ Order No. 2222, 172 FERC ¶ 61,247 at PP 90, 299.

⁶³¹ See *supra* P 28.

aggregator, and the distribution utility; and (2) require the distributed energy resource aggregator to report to the RTO/ISO any changes to its offered quantity and related distribution factors that result from distribution line faults or outages.⁶³² In addition, the Commission required each RTO/ISO to revise its tariff to include coordination protocols and processes for the operating day that allow distribution utilities to override RTO/ISO dispatch of a distributed energy resource aggregation in circumstances where such override is needed to maintain the reliable and safe operation of the distribution system.⁶³³ To account for different regional approaches and to provide flexibility, the Commission did not prescribe specific protocols or processes for the RTOs/ISOs to adopt as part of the operational coordination requirements but rather allowed each RTO/ISO to develop an approach to ongoing operational coordination.⁶³⁴

316. In Order No. 2222, the Commission also required each RTO/ISO to revise its tariff to apply any existing resource non-performance penalties to a distributed energy resource aggregation when the aggregation does not perform because a distribution utility overrides the RTO's/ISO's dispatch.⁶³⁵ In addition, the Commission declined to establish a generic requirement for RTOs/ISOs with respect to liability provisions, stating that it was not persuaded that all distribution providers face similar liability concerns and that these concerns should be addressed through standardized liability provisions in RTO/ISO tariffs.⁶³⁶

i. Filing

317. MISO proposes a day-ahead operational coordination framework under which the DER owners will assess the capability of an individual DER to provide energy or ancillary products, including any de-rates or unavailability from any known distribution system outages, for the next day and submit that information to the DERA.⁶³⁷

318. MISO explains that the DERA will submit a day-ahead offer for a DEAR resource type through MISO's Market Portal and that DERA offers will be included in the offers considered in the clearing of the Day-Ahead Market using co-optimized SCUC and

⁶³² Order No. 2222, 172 FERC ¶ 61,247 at P 310.

⁶³³ *Id.*

⁶³⁴ *Id.* P 311.

⁶³⁵ *Id.* P 312.

⁶³⁶ *Id.* P 313.

⁶³⁷ Transmittal at 23-24.

SCED algorithms to match offered supply with Market Participant bid demand.⁶³⁸ According to MISO, it will then send to the DERA and LBA/Transmission Operator (TOP) information on cleared Resources, including cleared DEARs anticipated for next day operation.⁶³⁹ MISO states that it will send each DERA and LBA/TOP start/stop and dispatch level notifications for each relevant DEAR. MISO asserts that the LBA/TOP is responsible for sending information related to cleared Resources to appropriate EDCs where the DERA is located.

319. MISO states that the LBA/TOP and the EDC may run next-day reliability studies on the transmission system and on distribution systems, respectively.⁶⁴⁰ MISO also states that any issues identified by the LBA/TOP or EDC next-day studies that affect a DEAR's ability to provide the cleared level of products should be relayed to the DERA and/or individual DER owners and that any issues identified should pass through LBA/TOP to the EDC for final approval. MISO asserts that EDCs will communicate all identified issues to the DERA and/or the individual DER owner consistent with regulatory requirements or business practices.

320. MISO explains that if the EDC communication is to an individual DER owner, then the DER owner should communicate the operating constraint to the DERA, and that if the EDC communication is to the DERA, then the DERA will decide which DERs it will deploy to meet the day-ahead obligation and communicate that to DER owners.⁶⁴¹ Otherwise, MISO states that the DERA will update any affected offers to reflect DEAR operating constraints associated with the LBA/TOP or EDC issues identified.⁶⁴²

321. MISO asserts that after the close of the Day-Ahead Market, the DERA will update its offers to reflect the latest known ability to provide energy and ancillary products for any DEARs that were not cleared.⁶⁴³ MISO states that the DERA will submit updated offers to the Forward Reliability Assessment Commitment (FRAC) process, and MISO will subsequently execute the FRAC SCUC process to meet MISO forecasted load.

⁶³⁸ *Id.* at 24.

⁶³⁹ *Id.*

⁶⁴⁰ *Id.*

⁶⁴¹ *Id.*

⁶⁴² *Id.*

⁶⁴³ *Id.*

MISO also states that it will send any additional next day start/stop commitments via a data exchange platform to Market Participants, including the DERA.

322. MISO proposes a real-time operational coordination framework under which the DER owner continuously assesses the capability of the DER and informs the DERA of any restrictions.⁶⁴⁴ MISO states that during Real-Time Market operations, if the DERA is operating and receiving dispatch signals from MISO through the Unit Dispatch System (UDS), the DERA is to be operating at the latest real-time cleared dispatch level sent from UDS using ICCP. MISO explains that if the DERA has received a signal to start a new commitment, then the DERA is to be at the economic minimum and ready to start operating in accordance with MISO dispatch signals.

323. MISO states that the DERA will submit offers using MISO's Market Portal up to 30 minutes prior to the operating hour to reflect the capability of DERA resources—including any restrictions from known or scheduled outages on the distribution system.⁶⁴⁵ MISO explains that if any of the DERs that are part of the DEAR have restrictions within the operating hour, then the DERA will update offers in the MISO Real-Time Offer enhancement tool. According to MISO, it runs SCED software every five minutes and sends economic setpoint instructions to all resources to instruct DERAs as to what their expected output should be for the next five-minute period based on the current offers.

324. MISO asserts that the DERA is expected to operate as instructed by following MISO's setpoint instructions received by ICCP.⁶⁴⁶ MISO states that if any restrictions to the DEAR are identified by the EDC, TOP, or LBA, then the EDC will communicate the restriction(s) to the DERA or the DER owner according to its communication protocols. MISO states that if the communication is to the DER owner, the DER owner will communicate its updated capability to the DERA, which then updates the new capability of the DEAR to MISO through either MISO's Market Portal, if it is more than 30 minutes prior to the operating hour, or through the Real-Time Offer override enhancement, if it is after 30 minutes prior to the operating hour.⁶⁴⁷

ii. Comments/Protests

325. MISO TOs argue that MISO should provide additional clarity on real-time operational coordination requirements between distribution companies and transmission

⁶⁴⁴ *Id.* at 25.

⁶⁴⁵ *Id.*

⁶⁴⁶ *Id.*

⁶⁴⁷ *Id.* at 25-26.

owners regarding DERA operations.⁶⁴⁸ MISO TOs also contend that it is important that dispatch instructions be sent to the EDC in addition to the LBA because the EDC will need this information to effectively manage distribution system safety and reliability and to issue override instructions. Similarly, OMS contends there needs to be communication pathways between the DERA and EDC.⁶⁴⁹ OMS states that RERRAs may wish, but are not required, to play an enabling role by creating DERA-EDC communication pathways to buttress RTO procedures or fill in gaps where they may exist. OMS notes that the primary responsibility for creating these communication pathways falls on MISO, but as the RTO begins to solidify these pathways in its BPMs, OMS intends to follow this process closely to identify any gaps and implications for RERRA jurisdictional procedures and potential action.

326. Entergy argues that the Tariff should include provisions addressing an EDC's ability to override MISO's dispatch of a DER when needed to maintain reliable and safe operation of the distribution system.⁶⁵⁰ Entergy states that, as far as it can tell, MISO does not include such Tariff provisions, or provisions concerning the required communication from an EDC to a DERA when the length of a restriction on the distribution system is ongoing and precludes the DERA (or a portion thereof) from participating in MISO markets.⁶⁵¹ Entergy also highlights that in many instances the EDC will not be able to contact the DER owner prior to shutting down or reconfiguring a distribution circuit or feeder. Entergy also responds to MISO witness Rauch's statement that "[t]he DERA will be responsible for providing the EDC with the individual DER outputs planned to meet the MISO DERA dispatch target."⁶⁵² Entergy contends that no system exists today for a DERA to provide an EDC with individual DER outputs to meet the MISO DERA dispatch instruction.

327. DTE Electric states that it agrees with the ICCP via WAN requirement for real-time setpoint instructions, arguing it should be used for real-time operational data exchange between EDCs and DERAs.⁶⁵³ However, DTE Electric argues that the time allotted to perform day-ahead distribution reliability studies, the time between market

⁶⁴⁸ MISO TOs Protest at 10.

⁶⁴⁹ OMS Protest at 14.

⁶⁵⁰ Entergy Protest at 17.

⁶⁵¹ *Id.* at 18.

⁶⁵² *Id.* at 17-18 (quoting Rauch Test. at 36).

⁶⁵³ DTE Electric Protest at 9.

clearing, and the FRAC process is inadequately short and infeasible.⁶⁵⁴ DTE Electric notes that there is only an hour from Day-Ahead Market clearing until the deadline for FRAC offer updates and, in this time, the EDC needs to perform next-day distribution system reliability analysis, communicate to the DERA, and the DERA needs to resubmit the bids based on EDC's feedback. DTE Electric argues that MISO must take actions to address the time components of the operation coordination to ensure EDCs and aggregators have adequate time to study reliability impacts and resubmit the bids to make DEAR participation successful in MISO as more DERs participate.⁶⁵⁵

328. In addition, DTE Electric advocates for safeguards on independent communication streams among DERAs, EDCs, and LBAs to ensure distribution system reliability and accurate load forecasting and argues that the Tariff lacks specifications on how the communication should be performed and what data or information should be detailed in the communications.⁶⁵⁶ DTE Electric requests a more thorough approach to safeguard how the communication is performed and what information should be included or excluded to protect customer privacy, information security, and critical infrastructure.

329. DTE Electric also comments that MISO repeatedly discusses running SCUC algorithms and sending unit commitment signals to DERAs as part of Day-Ahead, FRAC, and Real-Time Market processes.⁶⁵⁷ DTE Electric notes that the DEAR participation model requires the DEAR to self-commit, which means that MISO will take the commitment schedules from the DERAs and does not need to send any unit commitment signals to the DEARs.⁶⁵⁸ DTE Electric states that language in MISO's compliance plan creates confusion on what the Market Participants can expect regarding unit commitment signals and requests that MISO be more rigorous in describing the process and the communication of the unit commitment and economic dispatch among the Market Participants.⁶⁵⁹

330. Illinois Commission argues that EDC control over DER dispatch could present EDCs with worrying conflicts of interest that could lead them to prioritize interrupting

⁶⁵⁴ *Id.*

⁶⁵⁵ *Id.* at 10.

⁶⁵⁶ *Id.* at 8.

⁶⁵⁷ *Id.*

⁶⁵⁸ *Id.* at 8-9.

⁶⁵⁹ *Id.* at 9.

DERs or privileging their own DERA over third-party aggregators.⁶⁶⁰ Illinois Commission argues that EDC control over dispatch and dispatch override, without adequate oversight or transparency, could disadvantage DERAs in MISO's market and lead to EDCs exerting vertical market power.⁶⁶¹ Illinois Commission notes that MISO's filing does include opportunities for RERRAs to develop their own dispatch override rules and notes that properly-designed state rules should then minimize EDCs prioritizing their aggregations over third-party DERA. Illinois Commission argues that an ongoing robust stakeholder process is necessary to support RERRAs in developing dispatch override guidelines, above and beyond the communication that MISO stresses in its filing between RERRAs, MISO, EDCs, and DERAs.⁶⁶² Illinois Commission contends that MISO should provide further and ongoing technical information on dispatch overrides through an ongoing stakeholder process that brings EDCs, aggregators, and RERRAs into regular conversation.⁶⁶³

iii. Data Request Response

331. In response to Commission staff's request as to what Tariff language addresses operational coordination, MISO states that it proposes modifying section 38.1.1 of the Tariff by adding section 38.1.1.z, which states that that MISO shall, on behalf of the Market Participants, perform the services pertaining to the Energy and Operating Reserve Markets, including coordinating with various entities regarding claimed capacity, operations, modeling, metering, settlements and any other information relating to DEAR participation.⁶⁶⁴ MISO explains that it further proposes to add sections 38.7.b and 38.7.c to address operational coordination as discussed in the transmittal.⁶⁶⁵ MISO states that the DERA will have the obligation to submit offers to reflect their forecasted availability, communicate outages, and submit accurate offers into MISO's Energy and Operating Reserve Markets.⁶⁶⁶

⁶⁶⁰ Illinois Commission Comments at 10.

⁶⁶¹ *Id.* (citing PJM Independent Market Monitor, Comments, Docket No. ER22-962-000, at 4-6 (filed Apr. 4, 2022)).

⁶⁶² *Id.* at 10-11.

⁶⁶³ *Id.* at 11.

⁶⁶⁴ Data Request Response at 54.

⁶⁶⁵ *Id.* at 54-55.

⁶⁶⁶ *Id.* at 55.

332. In response to Commission staff's request for a discussion of how MISO addresses (1) reporting changes to a DEAR's offered quantity due to outages, and (2) protocols and processes to override dispatch of a DEAR, MISO states that the DERA submits Real-Time Offers using MISO's Market Portal up to 30 minutes prior to the operating hour to reflect the capability of DERA resources, including any restrictions from known or scheduled outages on the distribution system.⁶⁶⁷ MISO states that if any of the DERs that are part of the DEAR have restrictions within the operating hour, the DERA will update offers in the MISO Real-Time Offer enhancement tool.⁶⁶⁸ MISO states that section 40.2.7C of the Tariff discusses DEAR Offers for the full capability of their resource and also provides that any limits on the DEAR Offer must be consistent with Module D.⁶⁶⁹ MISO explains that section 38.2.5 of the Tariff requires the DERA as a Market Participant to notify MISO of changes in availability or quantity of the Resource it has committed. MISO states that it added a new section 38.1.1.aa which requires coordination through the LBA with the relevant EDC for the safety and reliability of the distribution system when dispatching DEARs.

333. In response to Commission staff's request for an explanation of how MISO proposes to apply non-performance penalties in the event of an override, MISO states that all existing performance penalties will apply and that no exemption from performance penalties will be given to DEARs when an EDC overrides MISO's dispatch.⁶⁷⁰ MISO asserts that a DEAR's excessive or deficient energy injection or withdrawal volumes will be subject to Revenue Sufficiency Guarantee Charges per Module C, section 40.3.3.2. MISO states that a DEAR with excessive or deficient volumes will also be subject to Excessive/Deficient Energy Deployment Charges per Module C, section 40.3.4. MISO also states that DEARs are subject to Contingency Reserve Deployment Failure Charges and Short-Term Reserve Deployment Failure Charges per Module C, section 40.3.4.

iv. Commission Determination

334. We find that MISO's proposal partially complies with the operational coordination requirements of Order No. 2222. First, we find that MISO's proposal partially complies with the requirement that each RTO/ISO revise its tariff to require the distributed energy

⁶⁶⁷ *Id.*

⁶⁶⁸ *Id.* at 55-56.

⁶⁶⁹ *Id.* at 56.

⁶⁷⁰ *Id.* at 57.

resource aggregator to report to the RTO/ISO any changes to its offered quantity and related distribution factors that result from distribution line faults or outages.⁶⁷¹

335. Section 38.2.5.iii of the Tariff requires the DERA, as a Market Participant, to notify MISO of any changes to the availability of, changes in quantity of, and/or changes in the Resources it has committed for Energy, Operating Reserve, Up Ramp Capability, Down Ramp Capability, and/or Short-Term Reserve as the Operating Day approaches, in accordance with timing specified in BPMs. Section 40.2.7C.b of the Tariff requires that any limits on the DEAR Offer covering the full capability of the Resource must be consistent with Module D.

336. MISO notes that the DERA will submit Real-Time Offers up to 30 minutes prior to the operating hour to reflect a DEAR's capability, including any restrictions from known or scheduled outages on the distribution system.⁶⁷² Further, MISO notes that if any of the DER(s) that comprise the DEAR have restrictions within the operating hour, the DERA will update offers in the MISO Real-Time Offer enhancement tool.⁶⁷³ However, these obligations are not in the Tariff, as required by Order No. 2222. Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that establishes the above requirements in its Tariff.

337. We also find that MISO's proposal partially complies with the requirement to revise its Tariff to include coordination protocols and processes for the operating day that allow distribution utilities to override RTO/ISO dispatch of a distributed energy resource aggregation in circumstances where such dispatch override is needed to maintain the reliable and safe operation of the distribution system.⁶⁷⁴ Section 38.1.1.aa of the Tariff requires that MISO "[c]oordinate through the [LBA] and/or Transmission Operator with the relevant [EDC] for the safety and reliability of the distribution system when dispatching Distributed Energy Aggregated Resources." While MISO's proposed Tariff revisions include a general requirement for MISO to coordinate with the EDC when dispatching DEARs for the safety and reliability of the distribution system, MISO's proposal does not appear to allow distribution utilities to override RTO/ISO dispatch of a distributed energy resource aggregation in circumstances where such override is needed to maintain the reliable and safe operation of the distribution system, as Order No. 2222

⁶⁷¹ Order No. 2222, 172 FERC ¶ 61,247 at P 310.

⁶⁷² Transmittal at 25; Data Request Response at 55-56.

⁶⁷³ Data Request Response at 55-56.

⁶⁷⁴ Order No. 2222, 172 FERC ¶ 61,247 at P 310.

requires.⁶⁷⁵ The Tariff should include sufficient detail on MISO's approach to ongoing operational coordination with respect to dispatch overrides to ensure that the protocols and processes are non-discriminatory and transparent.⁶⁷⁶ Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that revises its Tariff to include the coordination protocols and processes for the operating day that allow distribution utilities to override MISO dispatch of a DEAR in circumstances where such override is needed to maintain the reliable and safe operation of the distribution system.

338. In addition, we find that MISO's proposal complies with the requirement to revise its Tariff to apply existing resource non-performance penalties to a distributed energy resource aggregation when the aggregation does not perform because a distribution utility overrides RTO/ISO dispatch.⁶⁷⁷ As MISO states, there will be no exemptions from performance penalties given to DEARs when an EDC overrides MISO's dispatch and all existing nonperformance penalties will apply.⁶⁷⁸ MISO also specifically identifies applicable penalty provisions in its Tariff; therefore MISO's proposal complies with this requirement of Order No. 2222.⁶⁷⁹

339. Lastly, we find that MISO's proposal partially complies with the requirement to revise its Tariff to establish a process for ongoing coordination, including operational coordination, that addresses data flows and communication among itself, the distributed energy resource aggregator, and the distribution utility.⁶⁸⁰ MISO proposes Tariff revisions addressing data flows and communication between MISO and the DERA in

⁶⁷⁵ See Data Request Response at 56 (noting that it included DEARs in section 33.8.1 and section 33.8.2 which describes Manual Redispatch Compensation and Eligibility when Manual Redispatch is instructed by MISO).

⁶⁷⁶ See PJM Compliance Order, 182 FERC ¶ 61,143 at P 354.

⁶⁷⁷ Order No. 2222, 172 FERC ¶ 61,247 at P 312.

⁶⁷⁸ Data Request Response at 57.

⁶⁷⁹ *Id.* (discussing charges in sections 40.3.3.2 and 40.3.4); MISO, Proposed Tariff, Module B, § 33.8.2 (Manual Redispatch Compensation and Eligibility) (46.0.0); *id.*, Module C, § 38.7.A.iii (Distributed Energy Resource Aggregators) (32.0.0); § 38.7.A.iii ("For offers involving the [Planning Resource Auction], once the [Planning Resource Auction] offer window closes all offers tendered will be deemed accepted by [MISO] and, if cleared, will continue to be subject to the must offer obligations established in Module E-1 of the Tariff."); *id.*, Module E-1, § 69A.3.1 (Capacity Resources) (40.0.0).

⁶⁸⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 310.

section 38.7.B, specifically requiring MISO to communicate the quantities of the DEARs cleared to the DERA. While we find that MISO addresses data flows and communication between MISO and the DERA in section 38.7.B, we find that MISO's Tariff proposal does not adequately establish a process for ongoing coordination of data flows and communication between: (1) MISO and the distribution utility, or (2) the DERA and the distribution utility.⁶⁸¹ Proposed Tariff section 38.1.1.z requires MISO to coordinate with DERAs, EDCs/LSEs, LBAs, transmission owners, and RERRAs regarding claimed capacity, operations, modeling, metering, settlements and/or any other information related to the participation of a DERA, DEAR, or individual DER. The Tariff revisions in section 38.1.1.z merely require coordination about DEAR participation generally. We note also that it appears that MISO proposes to send EDCs information related to cleared Resources, including cleared DEARs,⁶⁸² but MISO does not include this in its Tariff as part of the process for operational coordination. Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that revises its Tariff to establish a process for ongoing coordination, including operational coordination, that addresses data flows and communication between: (1) the distribution utility and the DERA; and (2) MISO and the distribution utility in both Day-Ahead and Real-Time Markets.

340. As for some parties' more specific concerns about MISO's proposal with respect to ongoing operational coordination, we note that the Commission declined to prescribe specific protocols or processes for the RTOs/ISOs to adopt as part of the operational coordination requirements in Order No. 2222, and we will not do so here.⁶⁸³ In response to MISO TOs, we note that MISO is not required to address coordination between EDCs and transmission owners in order to comply with the operational coordination requirements of Order No. 2222. In addition, with respect to DTE Electric's concern that MISO's proposal provides inadequate time to perform day-ahead distribution reliability studies, this concern involves implementation details beyond the scope of the Order No. 2222 requirement to establish a process for ongoing coordination. Nevertheless, we encourage MISO to work with stakeholders to address these concerns as it develops its protocols and processes for ongoing operational coordination for inclusion in the Tariff and BPMs to ensure safe and reliable operation of the transmission and distribution systems.

⁶⁸¹ *Id.*

⁶⁸² *See* Transmittal at 24.

⁶⁸³ Order No. 2222, 172 FERC ¶ 61,247 at P 311.

d. Role of RERRA

341. To implement section 35.28(g)(12)(ii)(g) of the Commission's regulations, in Order No. 2222, the Commission required each RTO/ISO to specify in its tariff, as part of the market rules on coordination between the RTO/ISO, the distributed energy resource aggregator, and the distribution utility, how each RTO/ISO will accommodate and incorporate voluntary RERRA involvement in coordinating the participation of aggregated distributed energy resources in RTO/ISO markets.⁶⁸⁴ The Commission noted that possible roles and responsibilities of RERRAs in coordinating the participation of distributed energy resource aggregations in RTO/ISO markets may include, but are not limited to: developing interconnection agreements and rules; developing local rules to ensure distribution system safety and reliability, data sharing, and/or metering and telemetry requirements; overseeing distribution utility review of distributed energy resource participation in aggregations; establishing rules for multi-use applications; and resolving disputes between distributed energy resource aggregators and distribution utilities over issues such as access to individual distributed energy resource data.⁶⁸⁵ The Commission required that any such role for RERRAs in coordinating the participation of distributed energy resource aggregations in RTO/ISO markets be included in the RTO/ISO tariffs and developed in consultation with the RERRAs.⁶⁸⁶

342. Further, the Commission stated that, to the extent that metering and telemetry data comes from or flows through distribution utilities, the Commission required that RTOs/ISOs coordinate with distribution utilities and the RERRAs to establish protocols for sharing metering and telemetry data that minimize costs and other burdens and address concerns raised with respect to customer privacy and cybersecurity.⁶⁸⁷

343. In Order No. 2222-A, the Commission explained that, consistent with the goals of Order No. 2222, the Commission will evaluate on compliance whether an RTO's/ISO's proposal delineates a role for RERRAs that would result in unjust and unreasonable

⁶⁸⁴ *Id.* P 322.

⁶⁸⁵ *Id.* P 324. The Commission also noted that the roles delineated in CAISO's Distributed Energy Resource Provider tariff provisions may provide an example of how RERRAs could be involved in coordinating the participation of distributed energy resource aggregations in RTO/ISO markets. *Id.* P 323.

⁶⁸⁶ *Id.* P 324.

⁶⁸⁷ *Id.*

limits on the participation of distributed energy resource aggregators in wholesale markets.⁶⁸⁸

i. Filing

344. MISO states that the RERRA may be involved throughout the pre-enrollment, enrollment, modification, and dispute resolution processes.⁶⁸⁹ MISO explains that, before a DER can be enrolled in a DEAR, the distribution interconnection process must be completed. MISO notes that DER interconnections to the distribution system are conducted according to RERRA rules and that RERRAs may choose to develop and oversee DEAR Technical Review processes, including any RERRA-defined DER interconnection rules.

345. MISO also states that during the registration and modification of registration processes, the RERRA will confirm that the DER is eligible to participate in a wholesale program. MISO explains that this process includes confirmation by the RERRA that the DER is not participating in a retail program that would result in double counting or double compensation if the DER also participates in a wholesale aggregation. MISO asserts that disputes between DERAs and EDCs may best be handled by the RERRA.⁶⁹⁰ MISO states that RERRAs may also establish rules governing dispatch overrides of DEARs.

ii. Comments/Protests

346. Several commenters support MISO's proposal with respect to the role of the RERRA. Indiana Commission agrees with MISO's identification of RERRA roles and responsibilities in coordinating the participation of DERs to ensure safety and reliability.⁶⁹¹ Indiana Commission states that, under MISO's proposal, RERRAs will be involved throughout the pre-enrollment, enrollment, modification, and dispute resolution processes.⁶⁹² Michigan Commission states that MISO's proposal would encourage coordination among aggregators, distribution utilities, MISO itself, and state and local regulatory authorities in the aggregation process to facilitate registration, interconnection,

⁶⁸⁸ Order No. 2222-A, 174 FERC ¶ 61,197 at P 83 (citing Order No. 2222, 172 FERC ¶ 61,247 at PP 130, 279).

⁶⁸⁹ Transmittal at 27.

⁶⁹⁰ *Id.*

⁶⁹¹ Indiana Commission Comments at 5-10.

⁶⁹² *Id.* at 5.

operations, and dispute resolution.⁶⁹³ Michigan Commission contends that MISO's proposal strikes an appropriate balance between attempting to compel state and local regulatory involvement and deferring completely to state jurisdiction.⁶⁹⁴ Missouri Commission states that MISO's proposal properly contemplates the voluntary involvement of state regulators throughout pre-enrollment, enrollment, modification, and dispute resolution processes.⁶⁹⁵ OMS states that MISO rightly acknowledges that the option for system upgrades "should be handled by mutual agreement between the EDC and DERA — subject to RERRA oversight."⁶⁹⁶ OMS agrees with MISO that RERRAs will need to determine the appropriate cost assignment for entities under their jurisdiction.⁶⁹⁷ Regarding communication between the RERRA and other entities, such as EDC and DERA, OMS contends that RERRAs may wish, but are not required, to play an enabling role by creating DERA-EDC communication pathways to buttress RTO procedures or fill in gaps where they may exist.⁶⁹⁸

347. Consumers Energy supports the aspects of MISO's proposal that recognize the need to prioritize and complete state interconnection processes before MISO's proposed Market Participant registration processes begins.⁶⁹⁹ Consumers Energy agrees with MISO that disputes between EDCs and aggregators are best resolved by RERRAs.

348. Consumers Energy agrees with MISO that any distribution system interconnection process needs to be clear, concise, and complete before the Order No. 2222 implementation date.⁷⁰⁰ Consumers Energy asserts that much implementation-related detail work remains at MISO before RERRAs will be able to effectively integrate the Order No. 2222 process into the state interconnection and aggregation processes.⁷⁰¹ Consumers Energy supports MISO's proposal to provide for RERRA and EDC review of

⁶⁹³ Michigan Commission Protest at 13, 15.

⁶⁹⁴ *Id.* at 14.

⁶⁹⁵ Missouri Commission Protest at 7.

⁶⁹⁶ OMS Protest at 13 (quoting Transmittal at 19).

⁶⁹⁷ *Id.* at 13-14.

⁶⁹⁸ *Id.* at 14; *see supra* P 325.

⁶⁹⁹ Consumers Energy Protest at 9.

⁷⁰⁰ *Id.* at 10.

⁷⁰¹ *Id.* at 11.

DERs and DEARs before they can proceed with wholesale market registration and operation and emphasizes that preserving state authority over local distribution systems is required by and an essential part of Order No. 2222.

349. Indiana Commission notes that in Indiana there are utilities both in MISO and in PJM and states that uniform recognition regarding jurisdictional lines and the corresponding roles and responsibilities of the various parties is essential.⁷⁰² Indiana Commission avers that an RTO tariff cannot determine RERRA authority and that states either have regulatory authority over certain parties and under certain circumstances or they do not. Indiana Commission asks the Commission to make clear its understanding of where the jurisdictional lines are drawn and to resolve any ambiguities or differences among interested parties in the orders on compliance with Order No. 2222.⁷⁰³

350. Missouri Commission states that MISO should continue to work with distribution utilities, RERRAs, and other stakeholders to complement any state-level changes necessary to implement Order No. 2222, specifically with respect to (1) interconnection and utility review of proposed aggregations, (2) dispute resolution, (3) information sharing, communication, privacy, and cybersecurity, and (4) allocation of distribution-level costs.⁷⁰⁴

351. Illinois Commission notes that the DERA and the EDC may disagree over the technical review results and recommendations and that some of these disputes will inevitably become the responsibility of RERRAs to settle.⁷⁰⁵ Illinois Commission stresses that states should maintain jurisdiction over interconnection and relevant retail issues. Illinois Commission argues that MISO should continue to provide ongoing technical insights and guidance, as possible, into DER aggregations, metering, telemetry, and other critical issues through an ongoing stakeholder process. Illinois Commission notes that MISO lacks visibility into the distribution system but can provide relevant technical education on numerous other issues that would aid RERRAs in making informed decisions, particularly during DERA, EDC, and transmission owner disputes.⁷⁰⁶ Illinois Commission requests that the Commission direct MISO to provide detailed guidance to RERRAs on the rules, registration procedures, and data requirements that are

⁷⁰² Indiana Commission Comments at 3.

⁷⁰³ *Id.* at 5.

⁷⁰⁴ *Id.* at 11-16.

⁷⁰⁵ Illinois Commission Comments at 9.

⁷⁰⁶ *Id.* at 9-10.

necessary to allow for DERA to participate in both types of programs easily and accurately.⁷⁰⁷

352. OMS argues that the 10-day window allotted for the RERRA double counting review may be tight for some RERRAs and OMS recommends some flexibility in this step.⁷⁰⁸ OMS asserts that states, including state utility regulatory commissions, do not agree to assume any liability or obligation regarding MISO's expectation of a RERRA confirmation regarding double counting and/or any other confirmations requested, including but not limited to any confirmations regarding retail rates. OMS notes that it is important to recognize that neither MISO nor the Commission may impose obligations upon RERRAs in the implementation of the Tariff.

iii. Commission Determination

353. We find that MISO's proposal partially complies with the Order No. 2222 requirements regarding the role of RERRAs. We find that MISO's proposed Tariff sections 38.1.1, 38.2.2, and 38.7 demonstrate that MISO incorporates voluntary RERRA involvement in coordinating the participation of DEARs in MISO markets with respect to registration, modification, and settlements.⁷⁰⁹ However, while MISO explains that RERRAs may choose to develop and oversee EDC Technical Review processes, including any RERRA-defined DER interconnection rules and that RERRAs may also establish rules governing operational overrides of DEARs,⁷¹⁰ MISO does not propose to incorporate into its Tariff such roles for the RERRA. Order No. 2222 requires that any role for RERRAs in coordinating the participation of distributed energy resource

⁷⁰⁷ Illinois Commission Comments at 17.

⁷⁰⁸ OMS Protest at 13; *see* Illinois Commission Comments at 17 n.65 (arguing same).

⁷⁰⁹ MISO Proposed Tariff, Module C, § 38.1.1.z (Scope of Services) (39.0.0) (requiring MISO to coordinate with RERRAs regarding DEAR participation); *id.*, Module C, § 38.2.2.h (Market Participant Application and Qualifications) (39.0.0) (requiring Market Participant applicant seeking to submit DEAR offers to verify during the asset registration process that it has received any required approvals from all applicable RERRAs to enable such Resources to provide products and services); *id.*, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0) (RERRA notification and approval during registration, and referral to RERRA by MISO review of DERA participation).

⁷¹⁰ Transmittal at 27.

aggregations in RTO/ISO markets be included in the RTO/ISO tariffs.⁷¹¹ Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing to revise its Tariff to include any role for the RERRA that MISO proposes. Regarding Missouri Commission's comments on further coordination, we direct MISO to continue to coordinate with distribution utilities in developing the further compliance filing, as discussed above.⁷¹² In addition, as discussed *supra*, we require further compliance regarding MISO's proposed role for the RERRA with respect to dispute resolution.⁷¹³

354. Regarding OMS's request for flexibility to conduct the double counting review, we find that MISO's proposed 10-business day period for RERRA review adequately considers the role of the RERRA while ensuring that coordination requirements not create undue barriers to the entry of distributed energy resource aggregations in RTO/ISO markets.⁷¹⁴ We also note that MISO's Tariff proposal specifically provides that: "[MISO] will wait ten (10) Business Days before approving such DEAR registration to allow an opportunity for the RERRA(s) to contest the provided information[;] however, a RERRA will be able to contest a DEAR registration at any time."⁷¹⁵

355. In response to Indiana Commission's comments regarding jurisdiction, we reiterate that although Order No. 2222 requires each RTO/ISO to specify in its tariff how it will accommodate and incorporate voluntary RERRA involvement,⁷¹⁶ Order No. 2222

⁷¹¹ Order No. 2222, 172 FERC ¶ 61,247 at P 324.

⁷¹² *See supra* P 249.

⁷¹³ *See discussion supra* Part IV.B.7.b.ii.c.3.

⁷¹⁴ Order No. 2222, 172 FERC ¶ 61,247 at P 279. We also note, as discussed above, that MISO is required to clarify, as part of its further compliance filing addressing the distribution utility review period, whether its proposed role for the RERRA will change, including the timing of the RERRA's eligibility review to evaluate potential double counting, and to make any necessary Tariff revisions. *See supra* P 266.

⁷¹⁵ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.1.b; *see id.* ("[MISO] may continue to accept offers from the DERA, unless and until [MISO] receives a notification from the RERRA that . . . (b) claims loss of eligibility of one or more end use customers included in a resource registered with the DEAR, or (c) [MISO] determines as result of an audit or otherwise that the DEAR or any DER(s) comprising the DEAR are no longer eligible to participate in Transmission Provider's markets. . . .").

⁷¹⁶ Order No. 2222, 172 FERC ¶ 61,247 at P 322.

does not confer any RTO/ISO jurisdiction over the RERRA, and any RERRA involvement is voluntary. We disagree with protesters that MISO needs to provide detailed guidance to RERRAs on double counting. We find that MISO's proposal complies with the requirements of Order No. 2222 pertaining to the role of the RERRA.⁷¹⁷ Nevertheless, we encourage MISO to consult with RERRAs to develop guidance documents for RERRAs that provide additional clarity regarding double counting.⁷¹⁸

8. Modifications to List of Resources in Aggregation

356. In Order No. 2222, the Commission added section 35.28(g)(12)(ii)(e) to the Commission's regulations to require each RTO/ISO to establish market rules that address modification to the list of resources in a distributed energy resource aggregation.⁷¹⁹ The Commission required each RTO/ISO to revise its tariff to specify that distributed energy resource aggregators must update their lists of distributed energy resources in each aggregation (i.e., reflect additions and subtractions from the list) and any associated information and data, but that, when doing so, distributed energy resource aggregators will not be required to re-register or re-qualify the entire distributed energy resource aggregation.⁷²⁰ The Commission noted that any modification triggers the distribution utility review process.

357. However, the Commission stated that it may be appropriate for each RTO/ISO to abbreviate the distribution utility's review of modifications to the distributed energy

⁷¹⁷ See MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.1(b) (RERRA notification and approval); Transmittal at 8 ("After the LSE/EDC confirms or denies the wholesale participation eligibility of individual assets, this review outcome and supporting facts will be provided to the RERRA, as the applicable retail rate authority, to confirm what is included or excluded in the applicable retail rate."); Data Request Response at 15-16; MISO Answer at 17; Rauch Test. at 42 ("Additionally, during the registration and modification of registration processes, the RERRA will confirm that the DER is eligible to participate in a wholesale program. This includes confirmation by the RERRA that the DER is not participating in a retail program that would result in double counting or double compensation if the DER also participates in a wholesale aggregation.").

⁷¹⁸ See *supra* P 99 (encouraging MISO to develop guidance to provide market participants with additional clarity).

⁷¹⁹ Order No. 2222, 172 FERC ¶ 61,247 at P 335.

⁷²⁰ *Id.* P 336.

resource aggregations.⁷²¹ The Commission explained that, because the impacts of modifications may often be minimal, an abbreviated review process should be sufficient for the distribution utility to identify the cases where an addition to the list of resources might pose a safety or reliability concern. The Commission further explained that modifications to the list of resources in a distributed energy resource aggregation, and the resulting distribution utility and RTO/ISO review of those changes, could occasionally indicate changes to the electrical characteristics of the distributed energy resource aggregation that are significant enough to potentially adversely impact the reliability of the distribution or transmission systems and justify restudy of the full distributed energy resource aggregation. However, the Commission stated, it did not believe that, even in such circumstances, participation of the distributed energy resource aggregation would need to be paused during the review of modifications or restudy. The Commission stated that aggregators should be able to continue to bid the unmodified portion of their aggregation into RTO/ISO markets.

358. To the extent that an RTO/ISO requires distributed energy resource aggregators to provide information on the physical or operational characteristics of its distributed energy resource aggregation, the Commission required each RTO/ISO to revise its tariff to ensure that distributed energy resource aggregators must update such information if any modification to the list of resources participating in the aggregation results in a change to the aggregation's performance.⁷²² The Commission found that this requirement will ensure that the RTOs/ISOs have accurate and current information about the physical and operational characteristics of the distributed energy resource aggregations that are participating in their markets, with minimal administrative burden.

359. In Order No. 2222-A, the Commission explained that, occasionally, the removal of a distributed energy resource, particularly a large resource, from an aggregation could drastically change the operation and configuration of an aggregation on the distribution system and would need to be examined by a distribution utility.⁷²³ However, the Commission stated, because such drastic impacts will likely be the exception more than the rule, the Commission encouraged RTOs/ISOs to propose abbreviated distribution utility review processes for modifications to existing aggregations. For example, the Commission noted, an RTO/ISO may propose an abbreviated distribution utility review process as a default when an existing aggregation is modified but allow for a more

⁷²¹ *Id.* P 337.

⁷²² *Id.* P 338.

⁷²³ Order No. 2222-A, 174 FERC ¶ 61,197 at P 71 (citing Order No. 2222, 172 FERC ¶ 61,247 at P 337).

fulsome review when a modification surpasses some materiality threshold or meets certain criteria.

a. Filing

360. MISO states that modifications to the resources that compose an aggregation will mimic initial registration and enrollment processes, but DERAs will not be required to re-register or re-qualify their entire DER aggregation when making modifications.⁷²⁴ MISO asserts that unmodified portions of an aggregation will be able to continue to offer into MISO's Energy and Operating Reserve Market, assuming all other qualifications are met, including the 0.1 MW minimum size threshold, while modified portions are reviewed. MISO also states that modifications will be applied in MISO's quarterly model updates. MISO explains that, to the extent the model update cycle is changed, the modifications will be subject to the new cycle, subject to review timelines.

361. MISO notes that material modifications to a DEAR could result in the DEAR entering into a new EDC Technical Review.⁷²⁵ According to MISO, material modifications to the DEAR from an electric system impacts perspective could include anything that could materially change previous EDC Technical Review result validity. MISO explains that this could include, among others, adding or removing a DER, changing the expected injection or absorption capabilities of the DEAR, or major changes to the DEAR operating characteristics (i.e., moving from slow to very fast ramping). MISO also explains that factors not considered to be material modifications might include a change in DER ownership, kind-for-kind DER modifications, and insignificant location corrections. MISO states that it anticipates a degree of engineering judgement involved by the EDC, transmission owner, and MISO for decisions as to what constitutes a material modification; therefore, decisions regarding material modifications should be subject to the appropriate dispute resolution processes.

b. Comments/Protests

362. DTE Electric agrees with MISO that defining a material modification involves a certain degree of engineering judgement, and it is impossible to consider all potential situations.⁷²⁶ DTE Electric asserts that it is important that there not be prescriptive limits on which modifications could require a new study. DTE Electric states that it agrees with MISO's conclusion that a material modification could include anything that materially changes prior DEAR Technical Review results. DTE Electric adds that the addition or

⁷²⁴ Transmittal at 28.

⁷²⁵ *Id.* at 22.

⁷²⁶ DTE Electric Protest at 10.

removal of a DER or the limiting of its capability is material enough that any such addition or removal would require re-review of the aggregation. DTE Electric asserts that it is unacceptable in all cases to—as MISO proposes— remove any applicable assets from the aggregation, while allowing the balance of the aggregation to continue to participate in the wholesale market. Rather, DTE Electric argues that the EDC must be informed of specific removals to evaluate whether a re-review of part, or all, of the aggregation is necessary.⁷²⁷ For example, DTE Electric poses the example of a battery that can act both as a load and as an injection, and contends that the removal of the battery from an aggregation could lead to safety and reliability concerns from the balance of the aggregation and therefore warrant review of the aggregation in its entirety.⁷²⁸

363. MISO TOs argue that MISO’s proposal does not address how MISO will notify EDCs of third-party DERA registrations or modifications to registration applications.⁷²⁹ MISO TOs add that it is unclear how modifications to a DERA registration application would be detected during the year. MISO TOs assert that MISO does not address instances where a DEAR switches retail suppliers (i.e., CP Nodes) between MISO model updates.⁷³⁰ MISO TOs argue that MISO should provide greater clarity on how active retail switching aligns with the DEAR eligibility and technical review.

c. Data Request Response

364. In response to Commission staff’s request for additional support for MISO’s proposal to apply modifications in its quarterly model updates, MISO notes that BPM-10 section 5.2 describes the activities that may occur during a non-topology model update which occurs an additional four times a year.⁷³¹

365. In response to Commission staff’s question whether MISO proposes Tariff revisions that describe what constitutes a material modification, MISO clarifies that it proposes no such Tariff revisions.⁷³² MISO proposes that material modifications be a business practice which is carried out through RERRA and EDC review processes.

⁷²⁷ *Id.* at 10-11.

⁷²⁸ *Id.* at 11.

⁷²⁹ MISO TOs Protest at 8.

⁷³⁰ *Id.* at 9.

⁷³¹ Data Request Response at 57-58.

⁷³² *Id.* at 58.

MISO further notes that materiality is a concept that is used in various other contexts and has been accepted by the Commission for use within the Tariff.⁷³³

d. Commission Determination

366. We find that MISO's proposal complies with the requirement in Order No. 2222 to establish market rules that address modifications to the list of resources in a distributed energy resource aggregation.⁷³⁴ We find that MISO complies with the requirement to revise its Tariff to specify that distributed energy resource aggregators must update their lists of distributed energy resources in each aggregation (i.e., reflect additions and subtractions from the list) and any associated information and data, but that, when doing so, distributed energy resource aggregators will not be required to re-register or re-qualify the entire distributed energy resource aggregation.⁷³⁵ MISO's proposed Tariff section 38.7.A.iii.2 requires that the DERA update the list of DERs in each aggregation and any associated information and data associated with the constituent DERs, and that DERAs will not be required to re-register the entire DEAR for such modifications.

367. We also find that MISO complies with the requirement that, if an RTO/ISO requires distributed energy resource aggregators to provide information on the physical or operational characteristics of its distributed energy resource aggregation, then the RTO/ISO must revise its tariff to ensure that distributed energy resource aggregators must update such information if any modification to the list of resources participating in the aggregation results in a change to the aggregation's performance.⁷³⁶ Proposed section 38.7.A.i of the Tariff enumerates the information requirements that a DERA must comply with during initial registration and modification, and such requirements include information on the physical and operational characteristics of the DEAR.⁷³⁷

⁷³³ *Id.* (citing MISO, Tariff, Module C, § 38.9.4.5 (Information Requests) (30.0.0), § 38.9.4.5.g (Disclosure to Authorized Requestors); *id.*, § 38.2.3 (Market Participant Applicant Continuing Obligations) (30.0.0) 38.2.3.i.b (Market Participant Applicant Continuing Obligations)).

⁷³⁴ Order No. 2222, 172 FERC ¶ 61,247 at P 335.

⁷³⁵ *Id.* P 336.

⁷³⁶ *Id.* P 338.

⁷³⁷ MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.i ("Maximum level of participation (MW) and location of each DER within the DEAR being registered sufficient to allow defining or mapping to a single [EP Node].").

368. MISO explains that modifications to resources within an aggregation will mimic initial registration and enrollment processes.⁷³⁸ As part of MISO's proposed market rules for modifications, MISO provides 60 days for a technical review of a modification by the EDC.⁷³⁹ In its transmittal, MISO noted that DEAR material modifications *could* result in the DEAR entering into a new EDC Technical Review. However, MISO clarified in its Data Request Response that there is no material modification threshold in the Tariff that affects the EDC Technical Review and such materiality thresholds would be considered a business practice. We find that, based on the record, this 60-day review period is reasonable because it will ensure that distribution utilities have an adequate opportunity to review modifications to aggregations.⁷⁴⁰ However, while not required by Order No. 2222, we support MISO's proposed approach to consider whether a change to a DEAR constitutes a material modification. To the extent such a change is not material, we find that it may be appropriate to abbreviate the EDC's review of modifications to the DEAR, as discussed in Order No. 2222.⁷⁴¹ We encourage MISO to work with its stakeholders to address materiality thresholds and how they may impact the timing of the EDC Technical Review and include further details in the Tariff and/or BPMs as appropriate. In addition, as discussed above, we reiterate that MISO must submit a further compliance filing to

⁷³⁸ Transmittal at 28.

⁷³⁹ See MISO, Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0) § 38.7.A.iii.2 (“Upon the submission of a new *or change* to a DEAR for approval, the contact person(s) identified for the relevant LBA, EDC and LSE will receive notification requesting them to access the information provided and review their pending tasks. The Transmission Provider will provide the LBA, EDC and LSE sixty (60) Calendar Days in total to perform a technical review of the aggregation and take any necessary action(s).”) (emphasis added); Transmittal at 28 (“modifications to resources within an aggregation will mimic initial registration and enrollment processes”).

⁷⁴⁰ Order No. 2222-A, 174 FERC ¶ 61,197 at P 72 (“[We] reiterate that any proposed review period must be shown to be reasonable based on what is being reviewed.”); MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.iii.2 (“Upon the submission of a new or change to a DEAR for approval . . . [t]he Transmission Provider will provide the LBA, EDC and LSE sixty (60) Calendar Days in total to perform a technical review of the aggregation and take any necessary action(s).”).

⁷⁴¹ Order No. 2222, 172 FERC ¶ 61,247 at P 337 (“While any modification of a distributed energy resource aggregation will trigger distribution utility review, we clarify that it may be appropriate for each RTO/ISO to abbreviate the distribution utility’s review of modifications to the distributed energy resource aggregations.”).

revise its coordination requirements so that any verification to be conducted by the EDC, such as the EDC/LSE and LBA eligibility review, occurs during the 60-day review period.⁷⁴²

369. We also find that MISO's proposed section 38.7.A.iii.2, which provides that "the DERA may continue to offer from the unmodified portion of the DEAR during reviews by the EDC, LSE and LBA," is consistent with the explanation in Order No. 2222 that aggregators should be able to continue to bid the unmodified portion of their aggregation into RTO/ISO markets.⁷⁴³

370. We disagree with MISO TOs that MISO does not address how EDCs will be notified of third-party DERA modifications or that it is unclear how modifications to a DERA registration application would be detected during the year. MISO's proposed Tariff section 38.7.A.iii.2 provides that the contact person(s) identified for the relevant LBA, EDC, and LSE will receive notification upon the submission of a change to a DEAR for approval requesting them to access the information provided and review their pending tasks.

371. Lastly, we also disagree with MISO TOs that MISO does not address instances where a DEAR switches between CP Nodes. MISO's proposed Tariff section 38.7.A.i provides that MISO will maintain a mapping of the single EP Node making up the CP Node that comprise injections or withdrawals of a DEAR, and that any initial registration of or change to a DEAR will require the DERA to provide information to MISO, including location of each DER within the DEAR being registered sufficient to allow defining or mapping to a single EP Node.⁷⁴⁴ Therefore, when a modification occurs, the DERA must provide updated location information to MISO.

9. Market Participation Agreements

372. In Order No. 2222, the Commission added section 35.28(g)(12)(ii)(h) to the Commission's regulations to require each RTO/ISO to establish market rules that address market participation agreements for distributed energy resource aggregators.⁷⁴⁵ The Commission required each RTO/ISO to revise its tariff to include a standard market participation agreement that defines the distributed energy resource aggregator's role and

⁷⁴² See *supra* P 265.

⁷⁴³ Order No. 2222, 172 FERC ¶ 61,247 at P 337.

⁷⁴⁴ MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.i .

⁷⁴⁵ Order No. 2222, 172 FERC ¶ 61,247 at P 352.

responsibilities and its relationship with the RTO/ISO, which an aggregator is required to execute before it can participate in the RTO/ISO markets. The Commission stated that this market participation agreement must include an attestation that the distributed energy resource aggregator's aggregation is compliant with the tariffs and operating procedures of the distribution utilities and the rules and regulations of any RERRA.

373. The Commission required that the market participation agreements that the RTOs/ISOs include in their tariffs not limit the business models under which distributed energy resource aggregators can operate.⁷⁴⁶ The Commission explained that allowing distributed energy resource aggregators with varying business models to be included in such agreements should increase the ability of the distributed energy resource aggregators, and resources within such aggregations, to participate in the RTO/ISO markets. The Commission stated that permitting RTO/ISO prohibitions against certain business models in their market participation agreements is not necessary given a distributed energy resource aggregator's duty to adhere to RTO/ISO market rules, the attestation requirement that the Commission required to be included in the market participation agreements, as well as the ability of RTOs/ISOs to craft any necessary safeguards short of business model prohibitions within these agreements.⁷⁴⁷

374. The Commission stated that, with the exception of the attestation requirement and prohibition of business model limitations, it will not specify the exact terms and conditions of the market participation agreements.⁷⁴⁸ The Commission stated that this approach will give the RTOs/ISOs and stakeholders flexibility to develop appropriate agreements for their regions and will increase the ability of the distributed energy resource aggregators, and resources within such aggregations, to participate in RTO/ISO markets by better tailoring agreements to the operating conditions and needs of those markets, and thereby help to enhance competition in the markets. The Commission stated that it will evaluate the reasonableness of such proposals on compliance. The Commission noted that RTOs/ISOs and stakeholders may choose to include additional parties or incorporate related agreements in the proposed market participation agreements.⁷⁴⁹

⁷⁴⁶ *Id.* P 353.

⁷⁴⁷ *Id.* P 356.

⁷⁴⁸ *Id.* P 354.

⁷⁴⁹ *Id.* P 355.

a. Filing

375. MISO states that it will apply its existing standard Market Participant Agreement for use by a DERA.⁷⁵⁰ MISO explains that the contractual relationship between MISO and a party representing assets in MISO's markets is established through Attachment W to the Tariff, which is the Form of Market Participant Agreement. MISO notes that the agreement incorporates, by reference, the terms and conditions of the Tariff.⁷⁵¹ MISO asserts that a DERA will be required to execute the Market Participant Agreement to participate in MISO's markets and that MISO's relationship with a DERA will be similar to any other relationship with a Market Participant that represents multiple assets, in that MISO will not have a direct contractual relationship with the individual assets (i.e., DEARs) represented by the DERA.⁷⁵²

b. Comments/Protests

376. Ameren argues that the Commission should require MISO to revise its standard Market Participant Agreement for use by a DERA.⁷⁵³ Ameren contends that the current participation agreement lacks any insight of the future rules or requirements that may be adopted by each state, such as despite resolution, governance, potential fees, and process requirements. At a minimum, Ameren argues, the agreement must include provision that all state rules must be adhered to going forward. AEMA argues that the form of agreement that a DERA would use at interconnection is not clearly defined.⁷⁵⁴

c. Data Request Response

377. In response to Commission staff's question whether MISO proposes to require the distributed energy resource aggregator to attest that its aggregation is compliant with the tariffs and operating procedures of the distribution utilities and the rules and regulations of any RERRA, MISO states that its standard Form of Market Participant Agreement incorporates by reference the terms and conditions of the Tariff.⁷⁵⁵ MISO explains that the proposed Tariff section 38.7.A.i. requires that a DERA registration provide an

⁷⁵⁰ Transmittal at 28.

⁷⁵¹ *Id.* at 28-29.

⁷⁵² *Id.* at 29.

⁷⁵³ Ameren Protest at 7.

⁷⁵⁴ AEMA Protest at 20.

⁷⁵⁵ Data Request Response at 59.

attestation that it has achieved all necessary approvals and established all necessary arrangements with the RERRA, EDC, and/or LSE as appropriate and necessary for the DERA to participate in MISO's markets. MISO adds that proposed Tariff section 38.A.iii.1. requires that the DERA certify for each end use customer of the DERA that laws, regulations, or orders of the RERRA do not preclude the end use customer from directly participating in MISO's markets when the relevant utility distributed more than four million MWh in the prior fiscal year.

d. Commission Determination

378. We find that MISO's proposal partially complies with the requirement in Order No. 2222 to establish market rules that address market participation agreements for distributed energy resource aggregators.⁷⁵⁶ Specifically, MISO requires that a DERA must execute its existing standard Market Participant Agreement, Attachment W, which incorporates, by reference, the terms and conditions of the Tariff into the agreement.⁷⁵⁷ We find that MISO's use of its existing Market Participant Agreement complies with the requirement to include a standard market participation agreement that defines the distributed energy resource aggregator's role and responsibilities and that it must execute before participating in MISO's markets.⁷⁵⁸ By signing the Market Participant Agreement, an DERA agrees to satisfy all obligations under the terms and conditions of the Tariff.⁷⁵⁹ Those requirements include Tariff provisions that define the roles and responsibilities of the DERA, such as the attestation requirement, though, as we explain below, the attestation as proposed does not comply with Order No. 2222. We also find that there are no provisions in the Tariff or Market Participant Agreement that limit the business models under which DERAs can operate, consistent with Order No. 2222.⁷⁶⁰ In these respects, we find that MISO's proposal complies with Order No. 2222.

379. However, we find that MISO's proposed attestation requirement, in section 38.7.A.i. of the Tariff, may not comply with the requirement that the distributed energy resource aggregator must attest that its aggregation complies with the tariffs and

⁷⁵⁶ Order No. 2222, 172 FERC ¶ 61,247 at P 352.

⁷⁵⁷ Transmittal at 28-29.

⁷⁵⁸ Order No. 2222, 172 FERC ¶ 61,247 at P 352.

⁷⁵⁹ MISO Tariff, attach. W (Form of Market Participant Agreement), (30.0.0) § 10.0 ("The Tariff, in its entirety, is incorporated herein and made a part hereof.") § 4.0 ("The Market Participant agrees to take and pay for the requested services in accordance with the provisions of the Tariff and this MP Agreement.").

⁷⁶⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 353.

operating procedures of the distribution utilities and the rules and regulations of any RERRA.⁷⁶¹ As part of its registration process, MISO requires an attestation by the DERA that it has achieved all necessary approvals and established all necessary arrangements with the RERRA, EDC, and/or LSE, as appropriate, and necessary for the DEAR to participate in MISO's markets.⁷⁶² To Ameren's point, this attestation that the DERA has *achieved* all necessary approvals does not appear to ensure that a DERA will continue to comply with the tariffs and operating procedures of the distribution utilities, and the rules and regulations of any RERRA. Therefore, we find that MISO's proposed attestation may not comply with Order No. 2222.⁷⁶³ Because MISO's Market Participant Agreement incorporates by reference the Tariff, which includes MISO's proposed attestation requirement, we do not require MISO to revise the Market Participant Agreement itself. However, we direct MISO to file, within 60 days of issuance of this order, a further compliance filing that revises section 38.7.A.i. of the Tariff to require a DERA to submit an attestation that its DEAR complies with the tariffs and operating procedures of the EDCs, and the rules and regulations of any RERRA or, in the alternative, explains why no such Tariff revisions are necessary to comply with Order No. 2222.

10. Effective Date

380. In Order No. 2222, the Commission required each RTO/ISO to propose a reasonable implementation date, together with adequate support explaining how the proposal is appropriately tailored for its region and implements Order No. 2222 in a

⁷⁶¹ *Id.* P 352.

⁷⁶² MISO Proposed Tariff, Module C, § 38.7 (Distributed Energy Resource Aggregators) (32.0.0), § 38.7.A.i; MISO Tariff, attach. W (Form of Market Participant Agreement), (30.0.0), § 10.0 ("The Tariff, in its entirety, is incorporated herein and made a part hereof.").

⁷⁶³ Order No. 2222, 172 FERC ¶ 61,247 at P 352 ("We also adopt the NOPR proposal that this market participation agreement must include an attestation that the distributed energy resource aggregator's aggregation is compliant with the tariffs and operating procedures of the distribution utilities and the rules and regulations of any relevant electric retail regulatory authority. As the Commission explained in the NOPR, these requirements are necessary to ensure that a distributed energy resource aggregator complies with all relevant provisions of the RTO/ISO tariffs, the tariffs and operating procedures of the distribution utilities, and the rules and regulations of any other relevant electric retail regulatory authority.").

timely manner.⁷⁶⁴ The Commission stated that it will establish on compliance the effective date for each RTO's/ISO's compliance filing.

a. Filing

381. MISO requests an effective date of October 1, 2029.⁷⁶⁵ MISO explains that DERA registration would begin on October 1, 2029 and that DERAs would likely be permitted to participate in MISO's Energy and Operating Reserve Markets during the first quarter of 2030. MISO asserts that DERAs will be permitted to participate in the 2030 Planning Resource Auction, and therefore any DERAs that clear the Planning Resource Auction will be eligible to serve as a Capacity Resource for the 2030/2031 Planning Year.⁷⁶⁶

382. MISO states that completion of the MSE project, including replacing MISO's legacy systems and integrating new market engine software into MISO's systems, is a prerequisite to software and systems development needed to incorporate DEARs in MISO's markets.⁷⁶⁷ MISO asserts that the MSE project is scheduled for completion in 2024, and that it will deliver significant benefits and help mitigate risks through the ability to implement high-value market enhancements to manage uncertainty, variability, and resource modeling needs such as Multiple Configuration Resources (MCR) and DEARs. According to MISO, without the MSE project, these enhancements and other projects designed to deliver reliable and efficient outcomes for MISO in the future would need to be deferred or potentially cancelled. MISO claims that the MSE project will result in benefits totaling \$433 million.

383. MISO states that, after implementation of the MSE project, it has prioritized development and implementation of the MCR initiative due to the immediate reliability and economic benefits.⁷⁶⁸ MISO asserts that MCRs will effectively integrate highly variable renewable resources and reduce overall emissions from the MISO generation fleet.⁷⁶⁹ MISO claims that the emissions reductions are the result of more efficient deployment of existing combined cycle gas turbine (CCGT) units due to more precise

⁷⁶⁴ *Id.* P 361.

⁷⁶⁵ Transmittal at 32.

⁷⁶⁶ *Id.* at 32-33.

⁷⁶⁷ *Id.* at 33.

⁷⁶⁸ *Id.*

⁷⁶⁹ *Id.* at 34.

modeling enabled through MCRs, displacement of existing conventional resources by higher value MCRs, and enabling greater penetration of renewable energy resources.

384. MISO anticipates that the MCR initiative will result in immediate annual production cost savings in the range of \$14 million to \$34 million.⁷⁷⁰ MISO claims that those estimates are conservative given that the cost-benefit analysis was conducted in 2017 and that since then installed CCGT capacity has grown by 30%, natural gas prices have increased 67%, and net-load variability has increased due to a 72% increase in wind capacity and integration of 1.7 gigawatts (GW) in solar capacity. MISO states that, over the next five years, an additional six GWs of CCGT capacity is expected to come online, along with marginal increases in wind capacity, and a significant increase in solar capacity, with approximately 7 GWs of solar generation expected to come online in 2022 alone. According to MISO, these new renewable energy resources increase net-load variability, which will require additional flexibility from controllable supply resources such as MCRs.

385. MISO explains that it initially planned to implement MCRs on MISO's legacy systems; however, complexity of this product and its impact on market solve-times necessitated delay until after completion of the MSE project.⁷⁷¹ According to MISO, DERA implementation likewise cannot be implemented on MISO's legacy systems due to complexity of the system and software changes needed to integrate DERA. MISO asserts that it is prudent market development practice to implement market changes serially rather than in parallel, because implementation of multiple products which overlap can obscure market outcomes and make it difficult to assess benefits.

386. MISO states that unlike other RTO/ISO regions, the majority of MISO states are retail regulated and limit retail access to wholesale markets.⁷⁷² MISO asserts that, although demand response aggregation is currently performed through ARCs pursuant to Order No. 719, only parts of three MISO states allow third-party aggregators to aggregate retail customers for purposes of participation in MISO's markets. MISO claims that, due to Order No. 2222 and the Commission's Notice of Inquiry in Docket No. RM21-14 regarding the Order No. 719 opt-out provision related to the registration of ARCs, both RERRA regulation and EDC processes will need to be updated to address shifts in the distributed energy paradigm.

⁷⁷⁰ *Id.*

⁷⁷¹ *Id.* at 33.

⁷⁷² *Id.* at 34.

b. Comments/Protests

387. MISO TOs, Alliant, Ameren, Consumers Energy, DTE Electric, Entergy, and Xcel all support MISO's October 1, 2029 effective date.⁷⁷³ MISO TOs, Alliant, Ameren, Consumers Energy, DTE Electric, Entergy and Xcel all state that the proposed effective date strikes an appropriate balance between prioritizing critical Reliability Imperative⁷⁷⁴ initiatives, specifically the MSE project and the MCR initiative, while recognizing the need for further development of DERAs in the MISO footprint.⁷⁷⁵ Further, MISO TOs, Alliant, Ameren, Consumers Energy, DTE Electric, and Entergy assert that the proposed effective date will allow EDCs and RERRAs sufficient time to develop processes and implement systems to accommodate DERA market participation.⁷⁷⁶

388. Alliant states that the proposed effective date is reasonable to ensure that implementation of new systems is done efficiently and that prioritized projects are focused on, arguing that rushing one project to complete another project risks spending additional money to address issues and temporary fixes.⁷⁷⁷ Ameren asserts that, for states that currently do not allow for aggregation of DERs controlled by retail customers of EDCs, significant work remains on issues such as distribution system monitoring and two-way communications, metering, customer protections, state utility commission rules, tariffs for wheeling power to the markets, utility tariffs and cost allocation mechanisms, and interconnection.⁷⁷⁸ DTE Electric states that significant work is needed at the EDC level to ensure the continued safety and reliability of the distribution system, as these new

⁷⁷³ Alliant Comments at 3-4; Ameren Protest at 2-4; Consumers Energy Protest at 4-9; DTE Electric Protest at 3-5; Entergy Protest at 2-7; MISO TOs Protest at 5-7; Xcel Comments at 3-5.

⁷⁷⁴ MISO describes its Reliability Imperative as the analysis of the current and future state of the MISO Region, including markets, transmission planning, operations, and software system needs, which MISO has recognized the shared responsibility that MISO, its members, and RERRAs have to address the urgent and complex challenges to electric system reliability in the MISO Region.

⁷⁷⁵ Alliant Comments at 4; Ameren Protest at 2-3; Consumers Energy Protest at 5-8; DTE Electric Protest at 3-5; Entergy Protest at 3-7; MISO TOs Protest at 6; Xcel Comments at 3-5.

⁷⁷⁶ Alliant Comments at 4; Ameren Protest at 3-4; Consumers Energy Protest at 8-9; DTE Electric Protest at 3-4; Entergy Protest at 2; MISO TOs Protest at 6.

⁷⁷⁷ Alliant Comments at 4.

⁷⁷⁸ Ameren Protest at 3-4.

processes and technologies continue to increase the complexity of operation.⁷⁷⁹ DTE Electric argues that the Commission should not challenge MISO's decision to prioritize MCR; it contends that using flexible resources to their full potential through the MCR initiative is paramount.

389. Consumers Energy supports MISO's proposed effective date and states that requiring MISO to accelerate its proposed implementation date would have wide-reaching impacts, such as resources within MISO needing to be added or reallocated to meet timelines for process and system development, which would likely increase customer rates at a time when rates are already under pressure from fuel costs and necessary resilience investments.⁷⁸⁰ Additionally, Consumers Energy states that the Commission should give MISO time to mitigate electric supply reliability risks to customers from not balancing more controllable generation resources that are available and ready to serve with the increasing amount of intermittent renewable resources.⁷⁸¹ Consumers Energy argues that the MCR initiative is intended to provide valuable operational flexibility.⁷⁸²

390. Entergy states that the proposed effective date is reasonable and reflects the ongoing shared responsibility of MISO, its members, and RERRAs to maintain reliability in the MISO region despite challenges including significant shifts in the generation in the MISO region due to the retirement of baseload resources and an increased reliance on intermittent renewable resources, increasing frequency of incidents of extreme weather, and the need to replace legacy software systems relied on by MISO to operate the transmission system and administer its energy and operating reserves markets.⁷⁸³ Entergy asserts that many important MISO initiatives have been ongoing for years, and the reasonable and efficient implementation of Order No. 2222 requires that its implementation is sequenced with MISO's ongoing initiatives.

391. Xcel supports MISO's proposed effective date and argues that the MSE project is needed to update MISO's market operations technologies to provide a strong and durable platform for the complex processes and systems that will be needed to effectively manage

⁷⁷⁹ DTE Electric Protest at 4.

⁷⁸⁰ Consumers Energy Protest at 8-9.

⁷⁸¹ *Id.* at 7.

⁷⁸² *Id.* at 5-6.

⁷⁸³ Entergy Protest at 2-3.

MISO's activities as an independent system operator.⁷⁸⁴ Further, Xcel states that the MCR initiative is expected to provide immediate reliability benefits as MISO will be able to increase the operational flexibility of CCGT units through more efficient commitment and dispatch to balance the region's increased reliance on intermittent resources.⁷⁸⁵

392. In contrast, AEE/SEIA, AEMA, Entegritty, Illinois Commission, Michigan Commission, OMS, Public Interest Organizations, and Voltus all protest MISO's October 1, 2029 effective date, arguing that it is inconsistent with the requirements of Order No. 2222 and maintains existing barriers to the market.⁷⁸⁶ OMS and the Michigan Commission argue that Order No. 2222 should be implemented sooner than 2030 to take advantage of the reliability and economic benefits of DER aggregations.⁷⁸⁷ AEE/SEIA, AEMA, and OMS state that, given the unjust and unreasonable nature of existing barriers to participation of DERAs, the Commission should reject MISO's proposed effective date and its unilateral decision to prioritize various market enhancement initiatives, and the Commission should direct MISO to propose an earlier implementation date that better balances its obligation to comply with Order No. 2222 and implementation of the MCR initiative.⁷⁸⁸

393. AEE/SEIA and AEMA state that MISO is effectively seeking a multi-year waiver of the requirement to comply with Order No. 2222 without a sufficient showing to support such a waiver.⁷⁸⁹ Further, AEE/SEIA and Entegritty argue that a request to implement tariff revisions nearly 10 years after the rule directing them is not a reasonable implementation date.⁷⁹⁰ AEE/SEIA and OMS acknowledge that implementing Order No. 2222 may not be feasible until after the implementation of the MSE project; however, AEE/SEIA and OMS argue that, following the MSE project, MISO is prioritizing other

⁷⁸⁴ Xcel Comments at 3.

⁷⁸⁵ *Id.* at 3-4.

⁷⁸⁶ AEE/SEIA Joint Protest at 2-5; AEMA Protest at 5-9; Entegritty Protest at 3-4; Illinois Commission Comments at 5-7; Michigan Commission Protest at 15-19; OMS Protest at 4-12; Public Interest Organizations Protest at 3-11.

⁷⁸⁷ Michigan Commission Protest at 15; OMS Protest at 4.

⁷⁸⁸ AEE/SEIA Joint Protest at 5; AEMA Protest at 6; OMS Protest at 8-9.

⁷⁸⁹ AEE/SEIA Joint Protest at 3-4; AEMA Protest at 5.

⁷⁹⁰ AEE/SEIA Joint Protest at 4; Entegritty Protest at 3-4.

initiatives rather than complying with the Commission's directive.⁷⁹¹ OMS questions how MISO arrived at its final prioritization of the MCR initiative over Order No. 2222.⁷⁹² Public Interest Organizations aver that, in choosing to prioritize the MSE project and MCR initiative over Order No. 2222 implementation, MISO is choosing to ignore findings by the Commission that its existing Tariff is in violation of the FPA.⁷⁹³ Public Interest Organizations further argue that MISO has not provided sufficient evidence that both the MSE and MCR should be prioritized over the implementation of Order No. 2222.⁷⁹⁴

394. OMS, the Michigan Commission, and Public Interest Organizations question MISO's purported inability to pursue a parallel path for the implementation of the MCR initiative and Order No. 2222, stating that MISO does not provide sufficient evidence why parallel implementation is not possible outside of stating that pursuing these changes simultaneously would increase the risks to reliably implementing these products.⁷⁹⁵ OMS, the Michigan Commission, and AEMA request the Commission direct MISO to implement the MCR initiative and Order No. 2222 in parallel, or at a minimum order MISO to describe in sufficient detail why parallel implementation is not possible, and ensure planning for Order No. 2222 implementation is not put on hold.⁷⁹⁶ OMS argues that, should the Commission agree with MISO that parallel implementation is not possible, the Commission should direct MISO to pursue a phased approach for implementation prior to 2030.⁷⁹⁷ OMS contends that, given the speed at which DERs are changing and proliferating, much of the MISO-filed DEAR participation model will likely be outdated by 2029-2030.

395. Public Interest Organizations and AEMA argue that other RTOs/ISOs have proposed shorter lead times to implement Order No. 2222 and have the same challenges as MISO, such as the need to complete their MSE project, but have found a way to work

⁷⁹¹ AEE/SEIA Joint Protest at 4; OMS Protest at 4-5.

⁷⁹² OMS Protest at 5-6.

⁷⁹³ Public Interest Organizations Protest at 6-7.

⁷⁹⁴ *Id.* at 7-9.

⁷⁹⁵ Michigan Commission Protest at 15-18; OMS Protest at 7; Public Interest Organizations Protest at 9-10.

⁷⁹⁶ AEMA Protest at 9; Michigan Commission Protest at 19; OMS Protest at 8.

⁷⁹⁷ OMS Protest at 9, 12.

DERAs into their operation models in more reasonable timeframes.⁷⁹⁸ OMS and the Missouri Commission argue that most states in MISO are also in PJM or SPP, and because those states will have to be ready to implement Order No. 2222 in those RTOs/ISOs in 2026 and 2025, respectively, retail regulators will not delay implementation of Order No. 2222.⁷⁹⁹ The Indiana Commission asserts that Indiana is not contributing to any delays in MISO's implementation process and passed legislation that directs the Indiana Commission to adopt rules necessary to implement Order No. 2222 and granted it emergency rulemaking authority to expedite this undertaking.⁸⁰⁰

396. Voltus requests that the Commission proceed to a rulemaking in Docket No. RM21-14 and eliminate the Order No. 719 opt-out in light of MISO's delayed implementation of Order No. 2222 and reliability concerns.⁸⁰¹ The Missouri Commission asserts that the Order No. 719 opt-out should not prevent MISO from phasing in Order No. 2222 because the Commission is evaluating that issue and may act before 2029.⁸⁰²

397. Ameren states that implementation details remain a work in progress and cites MISO's proposal for the RERRA with respect to the prevention of double counting as an example.⁸⁰³ Ameren argues that states that currently have no rules, policies, or tariff provisions regarding the aggregation of DERs will have to depend on RTO/ISO tariffs implementing Order No. 2222 to develop some of the rules and policies that have yet to be developed. Additionally, Ameren avers that until MISO's compliance filing is approved, meaningful progress on developing the rules, policies, and tariffs will be difficult because EDC and stakeholders will not want to move forward on the assumption MISO's compliance is approved only to then have to start over if it is not approved or is approved with significant changes. Ameren states that, after MISO's compliance filing is approved, MISO will need sufficient time for stakeholder input, RERRA consideration, and state regulatory and other proceedings that will likely be necessary for implementation.

398. Illinois Commission encourages MISO to accelerate its timeline so that consumers may benefit from renewable distributed energy resources in the near term, DER usage

⁷⁹⁸ AEMA Protest at 9; Public Interest Organizations Protest at 10-11.

⁷⁹⁹ Missouri Commission Protest at 6; OMS Protest at 9-11.

⁸⁰⁰ Indiana Commission Comments at 10.

⁸⁰¹ Voltus Protest at 1-2.

⁸⁰² Missouri Commission Protest at 6-7.

⁸⁰³ Ameren Protest at 4.

can expand, and benefits from the market participation can be optimized.⁸⁰⁴ However, Illinois Commission states that if the lengthy delay is allowed, then the Commission should require MISO to provide a clear pathway toward implementation, with status reports on the steps required to achieving full implementation to keep the Commission and other stakeholders informed of MISO's progress.⁸⁰⁵ The Missouri Commission argues that the Commission should require MISO to use a flexible, transparent approach in collaboration with all affected stakeholders where MISO and affected stakeholders can meet and discuss progress and challenges towards implementation of Order No. 2222.⁸⁰⁶ The Missouri Commission notes that stakeholder collaboration may help identify ways to integrate Order No. 2222 compliance into MISO's ongoing projects and achieve an earlier implementation or a phase-in approach.⁸⁰⁷ Xcel states that it would also support a process whereby MISO would provide updates to the Commission and other stakeholders and provide an opportunity to address stakeholder questions.⁸⁰⁸

c. Answers

399. MISO states that Order No. 2222 did not proscribe an implementation date and asserts that the Commission, recognizing regional differences, directed each RTO/ISO to propose an implementation timeline that is reasonable for its respective markets.⁸⁰⁹ Therefore, MISO maintains that its implementation timeline is reasonable and appropriately tailored for the MISO region and disagrees with stakeholders' contentions that MISO's implementation timeline should be accelerated.⁸¹⁰ MISO argues that the time between now and 2029 will be best used to work on other market and underlying system enhancements that it believes will make the full DER implementation process seamless and able to provide the most value to the MISO region.⁸¹¹ MISO notes that there are multiple options for resource owners to participate in existing retail programs, or to participate in MISO's markets via existing load-serving entity programs, or to

⁸⁰⁴ Illinois Commission Comments at 5.

⁸⁰⁵ *Id.* at 7.

⁸⁰⁶ Missouri Commission Protest at 5-7.

⁸⁰⁷ *Id.* at 5-6.

⁸⁰⁸ Xcel Comments at 4-5.

⁸⁰⁹ MISO Answer at 3.

⁸¹⁰ *Id.* at 3-4.

⁸¹¹ *Id.* at 4.

participate directly in MISO's markets through RERRA aggregation programs. MISO reiterates that its proposed date is dependent on completion of a number of critical systems and software updates that are required to support compliance.⁸¹²

400. MISO also reiterates that the MCR and DEAR changes cannot be implemented in parallel.⁸¹³ For example, MISO explains that altering Revenue Sufficiency Guarantee make-whole payments to integrate both MCR and DEAR changes, in parallel, would further complicate implementation of the complex projects. MISO, in reasoning why parallel implementation is not advisable, states that testers would be attempting to determine the impacts of two unlaunched market changes simultaneously on the same settlement calculations, requiring MISO staff to predict market and Market Participant behavior of DEARs and MCRs both in isolation and in conjunction with each other. MISO argues that any deviations detected during parallel implementation would then need to be traced to one or both projects, greatly increasing the project timeline and implementation risk. MISO argues that system vendors and stakeholders would need to implement parallel changes as MISO makes changes to its system and processes because MCR and DEAR will both require customer testing and integration prior to implementation. Therefore, MISO states that implementing MCR and DEAR concurrently is not reasonable.⁸¹⁴

401. R Street argues that, for states operating in two different RTOs, there could be as great as a five-year difference between opportunities for customers to participate in MISO and in SPP, which proposes implementation in 2025, or in PJM, which proposes implementation in 2026.⁸¹⁵ R Street states that by delaying customers in the MISO region from participating in DER markets, as directed by Order No. 2222, MISO's proposal treats those customers substantially differently. R Street argues that utilities should not be able to claim the lack of sufficient planning or implementing the appropriate grid architecture as a reason to delay Order No. 2222 implementation.⁸¹⁶ R Street states that the Commission has been clear since 2008 that aggregators should be able to participate directly in organized wholesale markets and argues that utilities across the MISO territory should have been including such objectives in their planning efforts

⁸¹² *Id.* at 5-6 (discussing the MSE program as well as related registration and settlements system enhancements).

⁸¹³ *Id.* at 6-7.

⁸¹⁴ *Id.* at 7.

⁸¹⁵ R Street Answer at 1-2.

⁸¹⁶ *Id.* at 2.

since then.⁸¹⁷ R Street further argues that the Commission should reject the assumption that additional technology is needed because, it claims, an aggregator can control the DER.⁸¹⁸

402. Xcel states that it supports MISO's proposed effective date because it would enable MISO to implement two significant software upgrades that have been scheduled since 2018 and are expected to deliver upwards of \$34 million in production cost savings to customers, in contrast to the speculative benefits of participation of DER aggregations in wholesale markets.⁸¹⁹ Xcel clarifies that while it supports MISO's effective date, its utility operating company affiliates will work to be ready for the implementation of Order No. 2222 when MISO is ready, regardless of MISO's effective date. Xcel argues that R Street does not understand the implications of DER activities on distribution system safety and reliability.⁸²⁰ Xcel asserts that, without the necessary technical and operational considerations, there may be risks to the safe and reliable delivery of energy to end use customers based on use of the distribution system to enable wholesale market participation by aggregators and DERs.⁸²¹ Xcel also disagrees with R Street's suggestion that the need for distribution system enhancements is an excuse to delay implementation of Order No. 2222.⁸²²

d. Data Request Response

403. In response to Commission staff's request for more detail on how MISO determined that the benefits of DERA participation in the wholesale markets are unknown, MISO explains that there is no direct corollary to use in predicting the eventual benefits provided by DERs within the MISO system.⁸²³ MISO stated that its evaluation focused on the relative volume of DER, using existing resource types as a proxy, against the known volume of units which may benefit from MCRs, to provide a comparative, rather than an absolute value. MISO argues that this comparative value continues to show the relative benefits of providing more efficient market participation for the over

⁸¹⁷ *Id.* at 4.

⁸¹⁸ *Id.* at 3.

⁸¹⁹ Xcel Answer 2.

⁸²⁰ *Id.* at 3.

⁸²¹ *Id.* at 3-4.

⁸²² *Id.* at 5.

⁸²³ Data Request Response at 60.

100 GW of gas-fired generation in the MISO footprint, against the potential growth of DER. MISO asserts that while the pace of DER installation may exceed the number of new gas resources, controllable resources providing energy during the worst week in each season will be key to successful operation with the evolving generation portfolio.

404. In response to Commission staff's request for more detail on why DEAR and MCR changes cannot be implemented in parallel, MISO explains that simultaneous development on its systems (such as registration, Day-Ahead and Real-Time Market clearing engines, reliability commitment engines, data structures, energy market system, operator displays, public reports, and settlements) in parallel on more than one new product will result in increased efforts in code management, trouble-shooting efforts, and testing, and splits up limited and highly skilled development resources.⁸²⁴ Thus, MISO asserts that a sequential approach is expected to result in a quicker implementation of both products, due to the reduced overhead and coordination efforts.⁸²⁵ Nevertheless, MISO acknowledges that the development of the DEAR modeling could potentially begin as the developers complete their development work for MCRs, which would be before the MCR initiative was fully tested and deployed to production. In any case, MISO contends that successful sequential implementation will expedite understanding which change resulted in any problem.⁸²⁶ MISO establishes that its goal is to minimize the risk of breaking something by introducing two very large, complex changes to the settlement system sequentially rather than simultaneously.

405. In response to Commission staff's question whether MISO's implementation of the MSE project would reduce risks associated with parallel implementation of MCRs and DEARs, MISO states that attempting to implement MCRs or DEAR ahead of the MSE project would increase risks of implementation, and the legacy market system does not have the performance capability to support MCRs and DEARs and meet the required Day-Ahead Market clearing times.⁸²⁷ MISO states that MSE performance improvements will establish the baseline to enable development of MCRs and DEARs but will not reduce parallel implementation risks.

⁸²⁴ *Id.* at 61.

⁸²⁵ *Id.* at 61-62.

⁸²⁶ *Id.* at 62.

⁸²⁷ *Id.*

e. **Data Request Response Protests**

406. AEE/SEIA assert that they are not requesting that MISO be required to implement DEARs before implementing the MSE project.⁸²⁸ AEE/SEIA contend that by forcing DEARs to wait 10 years, and ignoring requests to consider partial expansion of DER participation, MISO is choosing to maintain barriers to market participation even in the face of significant growth in DERs.⁸²⁹ AEE/SEIA argue that, instead of further analyzing the market and grid benefits, MISO makes an unsupported assertion that controllable resources providing energy during the worst week in each season will be key to successful operation with the evolving generation portfolio.⁸³⁰ AEE/SEIA state that MISO's proposed October 1, 2029 effective date is inconsistent with the wants of the state regulators.⁸³¹

407. AEMA states that MISO's rationale that parallel implementation would result in increased effort is insufficient justification for the extreme timeline.⁸³² AEMA argues that MISO does not address the notion of a phased-in approach, which would be a significant step in establishing opportunities for DERs to begin participation in the MISO markets.⁸³³ AEMA further argues that MISO has not addressed whether the system could support limited DEAR implementation within the existing participation models.⁸³⁴ AEMA asserts that it seems unrealistic that a limited level of integration within current models would create significant performance capability issues for MISO's legacy market systems.

408. Public Interest Organizations state that MISO does not respond to Commission staff's request for an explanation of benefits it quantified for DERA participation.⁸³⁵ Public Interest Organizations assert that it is MISO's burden to show why Commission-

⁸²⁸ AEE/SEIA Joint Data Request Response Protest at 4.

⁸²⁹ *Id.* at 4-5.

⁸³⁰ *Id.* at 5 (citing Data Request Response at 60).

⁸³¹ *Id.* at 5-6.

⁸³² AEMA Data Request Response Comments at 3.

⁸³³ *Id.* at 3-4.

⁸³⁴ *Id.* at 4.

⁸³⁵ Public Interest Organizations Data Request Response Protest at 2-3.

mandated Order No. 2222 compliance must wait for the optional MCR initiative, and that MISO summarily dismissed the impacts of DEARs on its system.⁸³⁶

f. Answer to Data Request Response Protests

409. In defense of its proposed implementation date, MISO explains that it evaluated the unique needs of its stakeholders as a whole, along with MISO's market systems, software, and measures to address reliability in the MISO region and, based on this evaluation, MISO arrived on the October 1, 2029 effective date.⁸³⁷ MISO states that its efforts to implement its MCR initiative have been delayed by the mandates of Order No. 841 relating to electric storage participation.⁸³⁸ MISO reiterates that there are several existing resource types that offer opportunities for DERs to participate.⁸³⁹

g. Commission Determination

410. We find that MISO's proposed implementation timeline of October 1, 2029 partially complies with the effective date requirements of Order No. 2222.⁸⁴⁰ In Order No. 2222, the Commission required each RTO/ISO to propose a reasonable implementation date, together with adequate support explaining how the proposal is appropriately tailored for its region and implements Order No. 2222 in a timely manner.⁸⁴¹ We find that MISO's proposal is appropriately tailored insofar as MISO persuasively explains that it proposes to implement its MSE project before Order No. 2222 so that MISO can successfully implement Order No. 2222.⁸⁴² As MISO states,

⁸³⁶ *Id.* at 3-4.

⁸³⁷ Answer to Data Request Response Protests at 3.

⁸³⁸ *Id.* at 4.

⁸³⁹ *Id.* at 4-5.

⁸⁴⁰ Order No. 2222, 172 FERC ¶ 61,247 at P 361.

⁸⁴¹ *Id.*

⁸⁴² Transmittal at 33 ("The completion of the MSE project, including the replacement of MISO's legacy systems and software with the integration of new market engines into MISO's systems, is a necessary prerequisite to development of the software and systems needed to incorporate DEAR in the MISO's markets."); MISO Answer at 5 ("The MSE program is focused on upgrading legacy systems to accommodate current and future technologies, and MISO's legacy market systems are not sufficient to

completion of the MSE project, including replacing MISO's legacy systems and integrating new market engines into MISO's systems, is a prerequisite to software and systems development needed to incorporate DEARs in MISO's markets.⁸⁴³ Several commenters likewise acknowledge that implementing Order No. 2222 may not be feasible until after the implementation of the MSE project.⁸⁴⁴ As a result, we disagree with parties that argue that MISO should be required to implement Order No. 2222 prior to the completion of the MSE project, scheduled for 2024, because it provides the necessary platform to allow for DEAR participation in MISO's markets.

411. However, we find that MISO's proposed effective date of October 1, 2029 is not timely because, once MISO implements the MSE project, MISO proposes to defer Order No. 2222 implementation for several years.⁸⁴⁵ We recognize that MISO has other priorities ongoing within the MISO Region, such as the MCR initiative; however, those priorities do not bear upon the question whether an effective date of October 1, 2029 is timely for purposes of compliance with Order No. 2222. MISO explains that it prioritized development and implementation of the MCR initiative due to the immediate reliability and economic benefits.⁸⁴⁶ However, we note that facilitating distributed energy resource participation in RTO/ISO markets through implementation of Order No. 2222 will provide many of these same benefits.⁸⁴⁷

accommodate larger volumes of distributed energy resource technologies due to the age, inflexibility, and performance limitations of these systems.”).

⁸⁴³ Transmittal at 33.

⁸⁴⁴ Alliant Comments at 4; Ameren Protest at 2-3; Consumers Energy Protest at 5-8; DTE Electric Protest at 3-5; Entergy Protest at 3-7; MISO TOs Protest at 6; Xcel Comments at 3-5.

⁸⁴⁵ Transmittal at 33-34; Filing, Testimony of Todd Ramey (Ramey Test.), at 6 (graphic of timeline); Ramey Test. at 18 (“As discussed above, MISO's 2030 implementation date is driven by a deferred start date for the updates necessary for Order No. 2222 compliance to allow MISO to complete MSE, other foundational system upgrades, and implement the MCR product.”).

⁸⁴⁶ Transmittal at 33.

⁸⁴⁷ See Order No. 2222, 172 FERC ¶ 61,247 at P 4.

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412. Accordingly, we direct MISO to file, within 60 days of the date of issuance of this order, a further compliance filing that proposes a date for MISO to implement Order No. 2222 in a timely manner.⁸⁴⁸

The Commission orders:

(A) MISO's compliance filing is hereby accepted, subject to a further compliance filing, as discussed in the body of this order.

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

By the Commission. Commissioner Danly is concurring with a separate statement attached.

Commissioner Christie is concurring with a separate statement attached.

(S E A L)

Debbie-Anne A. Reese,
Deputy Secretary.

⁸⁴⁸ *Id.* P 361.

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Appendix A**Tariff Records Filed****Midcontinent Independent System Operator, Inc.****FERC FPA Electric Tariff****MISO Tariffs****Docket No. ER22-1640-000****Effective Date To Be Determined**[1.A, Definitions - A \(65.0.0\)](#)[1.B, Definitions - B \(53.0.0\)](#)[1.C, Definitions - C \(68.0.0\)](#)[1.D, Definitions - D \(63.0.0\)](#)[1.E, Definitions - E \(83.0.0\)](#)[1.F, Definitions - F \(58.0.0\)](#)[1.H, Definitions - H \(57.0.0\)](#)[1.I, Definitions - I \(47.0.0\)](#)[1.M, Definitions - M \(71.0.0\)](#)[1.O, Definitions - O \(54.0.0\)](#)[1.Q, Definitions - Q \(33.0.0\)](#)[1.R, Definitions - R \(69.0.0\)](#)[1.S, Definitions - S \(72.0.0\)](#)[1.U, Definitions - U \(37.0.0\)](#)[12, Dispute Resolution Procedures \(33.0.0\)](#)[33.8.1, Circumstances Requiring Manual Redispatch \(32.0.0\)](#)[33.8.2, Manual Redispatch Compensation and Eligibility \(46.0.0\)](#)[33.8.3, Manual Redispatch Cost Recovery \(32.0.0\)](#)[33.8.4, Notice and Posting \(32.0.0\)](#)[38.1.1, Scope of Services \(38.0.0\)](#)

[38.2.2, Market Participant Application and Qualifications \(39.0.0\)](#)

[38.2.5, Market Participant Obligations \(49.0.0\)](#)

[38.2.7, Generation Suspension, Generation Retirement, and System Sup \(55.0.0\)](#)

[38.3, Generation Owners, Load Serving Entities and ARCs \(35.0.0\)](#)

[38.7, Distributed Energy Resource Aggregators \(31.0.0\)](#)

[39.1.2, Rules for Self-Scheduled Resources \(37.0.0\)](#)

[39.2.1A, Product Requirements for Operating Reserve \(44.0.0\)](#)

[39.2.1B, Resource Requirements for Operating Reserve \(44.0.0\)](#)

[39.2.5E, Distributed Energy Aggregated Resource Offer Rules Day-Ahead \(31.0.0\)](#)

[39.2.9, Day-Ahead Energy and Operating Reserve Market Process \(59.0.0\)](#)

[39.2.10, Shortage Conditions in the Day-Ahead EORM \(42.0.0\)](#)

[39.2.11, Surplus Conditions in the Day-Ahead EORM \(41.0.0\)](#)

[39.3.1, Charges for DA EORM Purchases \(37.0.0\)](#)

[39.3.1A, Day-Ahead Revenue Sufficiency Guarantee Charges \(34.0.0\)](#)

[39.3.2A, Day-Ahead Operating Reserve Procurement Credits \(41.0.0\)](#)

[39.3.2B, Day-Ahead Revenue Sufficiency Guarantee Payments \(51.0.0\)](#)

[40.1.3, RAC Data Inputs \(40.0.0\)](#)

[40.1.4, RAC Process \(41.0.0\)](#)

[40.1.A.2, LAC Data Inputs \(37.0.0\)](#)

[40.1.A.3, LAC Process \(38.0.0\)](#)

[40.2.3, Product Requirements for Operating Reserve \(40.0.0\)](#)

[40.2.4, Resource Requirements for Operating Reserve \(43.0.0\)](#)

[40.2.7C, Distributed Energy Aggregated Resource Offer Rules Real-Time \(31.0.0\)](#)

[40.2.8, Self-Scheduled Resources \(38.0.0\)](#)

[40.2.15, Real-Time Energy and Operating Reserve Market Process \(45.0.0\)](#)

[40.2.17, Calculation of Real-Time Ex Post LMPs and Ex Post MCPs \(54.0.0\)](#)

[40.2.19, Real-Time Revenue Sufficiency Guarantee \(41.0.0\)](#)

[40.2.20, Capacity Shortage Conditions in the Real-Time Energy and Ope \(47.0.0\)](#)

[40.2.21, Capacity Surplus under Minimum Load Conditions in Real-Time \(38.0.0\)](#)

[40.2.23, Contingency Reserve Deployment \(33.0.0\)](#)

[40.3.3.1, Charges and Credits for Real-Time Energy and Operating Reser \(41.0.0\)](#)

[40.3.3.2, Real-Time Revenue Sufficiency Guarantee Distribution \(41.0.0\)](#)

[40.3.3.3, Credits for Real-Time Energy and Operating Reserve Market \(49.0.0\)](#)

[40.3.4, Charge for Excessive/Deficient Energy and Reserve Deployment \(51.0.0\)](#)

[40.3.5.1, Rationale for RTORSGP \(43.0.0\)](#)

[40.3.5.2, Types of Resources Covered by RTORSGP \(35.0.0\)](#)

[40.3.5.3, Resources \(34.0.0\)](#)

[40.3.5.4, RTORSGP Eligibility for Day-Ahead Committed Hours for Genera \(40.0.0\)](#)

[40.3.5.5, RTORSGP Eligibility for Real-Time Must-Run Resources \(40.0.0\)](#)

[40.3.5.6, Calculation of RTORSGP. \(35.0.0\)](#)

[40.3.6.1, Rationale for DAMAP \(38.0.0\)](#)

[40.3.6.2, Types of Resources Covered by DAMAP \(33.0.0\)](#)

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[40.3.6.4, DAMAP Eligibility \(42.0.0\)](#)

[53.1, Conditions, Functions or Actions Monitored \(39.0.0\)](#)

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[63.1, Conduct Subject to Mitigation \(32.0.0\)](#)

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[63.4.1, Determination of Narrow Constrained Areas and Dynamic NCAs \(48.0.0\)](#)

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[64.1.1, Thresholds for Identifying Physical Withholding \(55.0.0\)](#)

[64.1.2, Thresholds for Identifying Economic Withholding \(51.0.0\)](#)

[64.1.3, Thresholds for Identifying Uneconomic Production \(44.0.0\)](#)

[64.1.4, Reference Levels \(66.0.0\)](#)

[65.2.2, Implementation \(46.0.0\)](#)

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[65.3.1, Imposition \(45.0.0\)](#)[66, Annual Review \(36.0.0\)](#)[68A.8, Calculation of Transmission Losses \(35.0.0\)](#)[69A.1.1, Forecasted Demand Identification \(37.0.0\)](#)[69A.3.1, Capacity Resources \(40.0.0\)](#)[69A.3.1.a, Generation Resources that are not Dispatchable Intermittent \(42.0.0\)](#)[69A.3.1.d, Use Limited Resources \(34.0.0\)](#)[69A.3.1.e, Intermittent Generation and Dispatchable Intermitt \(33.0.0\)](#)[69A.3.1.g, Determination of Deliverability \(40.0.0\)](#)[69A.4.1, Seasonal Accredited Capacity of Capacity Resources \(38.0.0\)](#)[69A.4.5, Attributes of ZRCs \(39.0.0\)](#)[SCHEDULE 26A, Multi-Value Project Usage Rate \(36.0.0\)](#)[SCHEDULE 27, RTORSGP and DAMAP \(55.0.0\)](#)[SCHEDULE 29, Energy and Operating Reserve Market Simultaneous Co-optimize \(51.0.0\)](#)[SCHEDULE 29A, ELMP for Energy and Operating Reserve Market: Ex-Post Prici \(66.0.0\)](#)[SCHEDULE 53, Seasonal Accredited Capacity Calculation \(33.0.0\)](#)[ATTACHMENT MM, Multi-Value Project Charge \(MVP Charge\) \(44.0.0\)](#)[ATTACHMENT TT, Measurement and Verification \(M and V\) Criteria \(36.0.0\)](#)[ATTACHMENT UU, Energy Efficiency Resources Measurement & Verification Proce \(34.0.0\)](#)**Docket No. ER22-1640-001**Effective Date To Be Determined[38.1.1, Scope of Services \(39.0.0\)](#)[38.7, Distributed Energy Resource Aggregators \(32.0.0\)](#)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Midcontinent Independent System Operator, Inc.

Docket Nos. ER22-1640-000
ER22-1640-001

(Issued October 10, 2023)

DANLY, Commissioner, *concurring*:

1. I concur with this order on the compliance filing¹ submitted by Midcontinent Independent System Operator, Inc. (MISO), in response to Order No. 2222.² I dissented from Order No. 2222 because I disagreed that the Commission should exercise jurisdiction over the participation of Distributed Energy Resources in markets administered by Regional Transmission Organizations or Independent System Operators (collectively, RTOs).³ My concern was that the Commission should not be in the business of micro-managing RTO activities that directly affect (and burden) the distribution system which, I must point out again, is primarily under state jurisdiction.

2. MISO made a good faith effort to comply with Order No. 2222. While I continue to disagree with Order No. 2222 itself, I agree that MISO failed to fully comply with its scores of dictates. I do not envy MISO the task we imposed upon them. One hundred percent compliance probably is impossible in a first, or perhaps even second, attempt. We shall see.

3. This underscores my original concern about the Commission's intrusive interference into the administration of RTO markets and distribution-level systems. Order No. 2222 not only took over many state powers but also—as confirmed today—permits RTOs extremely limited discretion to do anything other than step in line with the Commission's directives for how every little thing should work. This is bad policy, runs contrary to the basic principles underlying the Federal Power Act's division of

¹ *Midcontinent Indep. Sys. Operator, Inc.*, 185 FERC ¶ 61,011 (2023).

² *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 2222, 172 FERC ¶ 61,247 (2020), *order on reh'g*, Order No. 2222-A, 174 FERC ¶ 61,197, *order on reh'g*, Order No. 2222-B, 175 FERC ¶ 61,227 (2021).

³ Order No. 2222, 172 FERC ¶ 61,247 (Danly, Comm'r, *dissenting*); *see also* Order No. 2222-A, 174 FERC ¶ 61,197 (Danly, Comm'r, *dissenting*).

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jurisdiction between FERC and the states, and is proving to be, as expected, a burdensome waste of time and money.

For these reasons, I respectfully concur.

James P. Danly
Commissioner

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Midcontinent Independent System Operator, Inc.

Docket Nos. ER22-1640-000
ER22-1640-001

(Issued October 10, 2023)

CHRISTIE, Commissioner, *concurring*:

1. I concur with today's order. I write separately to address the order's determination regarding MISO's proposed locational requirements to comply with Order No. 2222.¹

2. The pricing mechanism used in all RTO energy markets is Locational Marginal Pricing (LMP), which sets prices that are paid to generation resources *at the node*. By requiring each RTO/ISO "to establish locational requirements for distributed energy resources to participate in a distributed energy resource aggregation that are as geographically broad as technically feasible,"² Order No. 2222 essentially urged RTOs/ISOs to pay compensation differently to this one category of resources — Distributed Energy Aggregated Resources (DEARs) — with a pricing mechanism set more broadly than nodally in energy markets. That directive raises obvious issues of undue preference toward DEARs and undue discrimination against the other resources being paid LMP.

3. Indeed, in MISO's compliance filing, MISO proposes that DEARs must be aggregated to a single Elemental Pricing Node (EP Node) for participation within MISO, explaining that "[t]his aggregation matches the granularity of MISO's dispatch, *allowing DEARs to be priced equivalently with other resources participating in MISO's Energy and Operating Reserve Markets*."³ MISO's proposal to price DEAR compensation at the

¹ See Order at Part IV.B.3.

² See *Participation of Distributed Energy Res. Aggregations in Mkts. Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators*, Order No. 2222, 172 FERC ¶ 61,247, at P 204 (2020), *order on reh'g*, Order No. 2222-A, 174 FERC ¶ 61,197, *order on reh'g*, Order No. 2222-B, 175 FERC ¶ 61,227 (2021) (amending the Commission's regulations "to require each RTO/ISO to revise its tariff to establish locational requirements for distributed energy resources to participate in a distributed energy resource aggregation that are as geographically broad as technically feasible").

³ Transmittal at 10 (emphasis added).

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node is technically feasible and is economically efficient, non-discriminatory, and fair because it treats all resources similarly. While I believe we should accept MISO's proposal right now rather than make MISO produce more paperwork, since this order at least does not reject MISO's nodal pricing proposal, I will concur.

For these reasons, I respectfully concur.

Mark C. Christie
Commissioner

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