

122 FERC ¶ 61,172
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Suedeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellingshoff.

Midwest Independent Transmission System Operator, Docket Nos. ER07-1372-000
Inc. ER07-1372-001

ORDER ON ANCILLARY SERVICES FILING

(Issued February 25, 2008)

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1. On September 14, 2007, as amended on September 19, 2007, the Midwest Independent Transmission System Operator, Inc. (Midwest ISO) filed, pursuant to section 205 of the Federal Power Act (FPA),¹ a revised proposal to implement a day-ahead and real-time ancillary services market (ASM) with a launch date of June 1, 2008. As explained below, we accept the revised ASM proposal, as modified, and direct the Midwest ISO to submit compliance filings prior to the ASM launch.

2. When the Commission approved the start of the Midwest ISO energy markets, it expressed concern with regard to short-term reliability and how the Midwest ISO would retain independent control of the system despite the ability of the 24 Balancing Authorities to re-dispatch their generation or to reconfigure transmission to resolve constraints. Accordingly, the Commission required the Midwest ISO to establish a dialogue with stakeholders on consolidation of the Balancing Authority functions for the express purpose of achieving a significant reduction in the number of Balancing Authorities and the eventual consolidation of most Balancing Authority functions into the Midwest ISO.² In this proposal, the Midwest ISO effectively accomplishes this objective and resolves the concerns expressed by the Commission.

3. The proposal under consideration represents a significant undertaking that will yield substantial reliability and efficiency benefits. Pursuant to its proposal, the Midwest ISO will determine operating reserve requirements and procure operating reserves³ from all qualified resources, in place of the current system of local management and

¹ 16 U.S.C § 824d (2000 & Supp. V 2005).

² See *Midwest Indep. Transmission Sys. Operator, Inc.*, 107 FERC ¶ 61,191, at P 124 (2004).

³ The Midwest ISO and the IMM identify the relevant product markets as regulating, spinning and supplemental reserves. Further, they explain that spinning and supplemental reserves represent comparable substitutes and, therefore, are bundled into a single product market referred to as contingency reserves. They refer to regulating and contingency reserves collectively as operating reserves.

procurement of reserves by the 24 Balancing Authorities.⁴ The Midwest ISO filing includes proposed tariff revisions to transfer and consolidate Balancing Authority responsibility in the Midwest ISO so that the Midwest ISO may become the North American Electric Reliability Council (NERC)-certified Balancing Authority for the entire Midwest ISO Balancing Authority Area. This will allow for the centralized management of ancillary services. The proposal will also create a single market for ancillary services that will allow for price competition among resources. Furthermore, the proposed ASM provides for greater participation by demand resources and scarcity pricing through the use of demand curves as part of the co-optimization process. We expect that the proposed simultaneous co-optimization of energy and operating reserve markets, combined with the expected increased participation of demand resources, will substantially improve efficiency and reliability in one of the largest organized markets in North America.⁵

4. The Midwest ISO undertook an extensive stakeholder process, beginning on March 15, 2005, to develop and build an understanding of its ASM proposal. The Midwest ISO has also committed to work with stakeholders, a Readiness Advisor, the OMS and state commissions to ensure a timely and seamless implementation of its proposal. We consider these stakeholder processes to be necessary and sufficient for a successful market start that is understood and supported by stakeholders.

5. In conditionally accepting this new market, we have given careful consideration to the recommendations of the Midwest ISO, the Independent Market Monitor (IMM), the Organization of Midwest ISO States (OMS) and other interested parties regarding market power and mitigation. To address the market power concerns that have been raised, we are adopting a comprehensive package of market mitigation measures that will ensure that ancillary services market rates are just and reasonable as the region moves from cost-based rates to market-based rates. For example, we adopt conduct and impact mitigation tests that are the same as those that exist in the MISO's current energy market and that have worked well in the region. These mitigation measures also have been applied successfully in other ancillary service markets (such as the New York ISO). Furthermore, to address the concerns of the OMS, we are adopting its proposal to

⁴ A Balancing Authority is responsible for maintaining the load-resource balance within the Balancing Authority Area, which is defined as the collection of generation, transmission, and loads within the metered boundaries of the applicable Balancing Authority. Currently, the Midwest ISO splits reliability functions with 24 individual Balancing Authorities, who have delegated certain functions to the Midwest ISO.

⁵ We note that the Midwest ISO expects the improved efficiencies of the ASM to provide between \$88 and \$183 million in benefits annually.

substantially reduce the conduct and impact thresholds during the market's start-up period. In addition, we have accepted a plan under which the IMM will audit and monitor for potential physical or economic withholding, thereby further providing a check on the potential exercise of market power. Taken together, we believe this integrated package of mitigation measures will ensure that market-based rates for ancillary services are just and reasonable.

6. We find that the Midwest ISO's revised proposal addresses the deficiencies identified in the Guidance Order and we accept the proposal, as modified. We also accept the Midwest ISO's plan for Balancing Authority consolidation, Readiness Plan, and reversion procedures. Finally, the Commission conditionally accepts the ASM start-up for June 1, 2008, as requested, subject to the Midwest ISO filing its Reversion Plan, Balancing Authority Agreements and market readiness certification as provided for herein.

I. Background

A. Midwest ISO's Filings

7. The Commission rejected without prejudice the Midwest ISO's initial ASM proposal and provided guidance to better enable the Midwest ISO to prepare and re-file a complete proposal.⁶ The Commission explained that the filing did not include (1) a market power analysis supporting the proposed ASM or (2) a readiness plan to ensure reliability during the transition from the current reserve and regulation system, which is managed by individual Balancing Authorities, to a centralized ASM managed by the Midwest ISO.

8. The Midwest ISO filed its revised proposal on September 14, 2007. On September 19, 2007, the Midwest ISO filed proposed amendments to its September 14 filing. It explains that the amendments correct minor typographical errors and provide inadvertently omitted language in certain definitions and Transmission and Energy Markets Tariff (TEMT or tariff) sections.

9. By order issued on November 19, 2007,⁷ the Commission directed the Commission Staff to convene a Technical Conference to explore the issues raised by the

⁶ *Midwest Indep. Transmission Sys. Operator, Inc.*, 119 FERC ¶ 61,311, *reh'g denied*, 120 FERC ¶ 61,202 (2007) (Guidance Order).

⁷ *Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,190 (2007) (Order Establishing Technical Conference).

Midwest ISO's market power analysis and proposed mitigation plan. Commission Staff held the Technical Conference on December 6, 2007.

10. The Midwest ISO asserts that the proposed ASM will provide for the efficient acquisition and pricing of operating reserves. According to the Midwest ISO, the simultaneous co-optimization approach seeks to minimize overall production costs in the Midwest ISO markets through the coordinated market-based procurement of both energy and operating reserves. The Midwest ISO explains that variations of this approach are already in use by existing ISOs and regional transmission organizations (RTOs) that provide ancillary services through market-based mechanisms.

B. Notices and Responsive Pleadings, and Comments on the Technical Conference

11. Notice of the Midwest ISO's September 14, 2007 filing was published in the *Federal Register*, 72 Fed. Reg. 54,252 (2007), with interventions and protests due on or before October 5, 2007.⁸ Notice of the Midwest ISO's September 19, 2007 amendment was published in the *Federal Register*, 72 Fed. Reg. 56,733 (2007), with interventions and protests due on or before October 10, 2007. Notices of intervention and motions to intervene were filed by the entities identified in Appendix A, and the party abbreviations listed in Appendix A will be used throughout this order. Answers were filed by Hoosier & Southern Illinois, the Midwest ISO, Midwest Transmission Customers, Midwest TDUs, Acciona Wind, the Illinois Commission, and Ameren.

12. Notice of the Technical Conference was published in the *Federal Register*, 72 Fed. Reg. 66,164 (2007). Comments on the discussion at the Technical Conference were due on or before December 20, 2007, and reply comments were due on or before January 11, 2008.⁹ The Commission received twelve comments and nine reply comments. Parties who filed post-Technical Conference comments and reply comments are identified in Appendix A.

13. On February 8, 2008, Midwest TDUs filed a motion to lodge an informational report filed with the Commission by the IMM in Docket No. ER07-235-000.

⁸ See Notice of Extension of Time, Docket No. ER07-1372-000 (Sept 26, 2007); Notice of Extension of Time, Docket No. ER07-1372-001 (Sept. 28, 2007).

⁹ See Notice of Extension of Time for Reply Comments, Docket No. ER07-1372-000 (December 7, 2007).

II. Procedural Matters

14. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2007), the notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

15. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2007), we will grant the motions to intervene out of time of WAPA, Beacon Power, and Alliant, given their interests in the proceeding, the early stage of the proceeding, and the absence of any undue prejudice or delay.

16. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2007), prohibits an answer to a protest or an answer unless otherwise ordered by the decisional authority. We will accept the answers of Hoosier & Southern Illinois, the Midwest ISO, Midwest Transmission Customers,¹⁰ Midwest TDUs, Acciona Wind, the Illinois Commission, and Ameren in Docket Nos. ER07-1372-000 and ER07-1372-001 because they have provided information that assisted us in our decision-making process.

17. We will grant Midwest TDUs' motion to lodge to the extent that it brings the report to our attention, but we will not allow its arguments interpreting that report.¹¹

III. Substantive Matters

18. As discussed below, we accept the Midwest ISO's proposed ASM, subject to modification and further compliance filings.

A. Costs and Benefits of the Proposed ASM

1. Midwest ISO's Projection of Costs and Benefits

19. The Midwest ISO asserts that the proposed ASM will increase the efficiency of the energy markets while minimizing the costs, provide for the efficient acquisition and pricing of operating reserves, provide a mechanism for increased competition through additional available resources, including demand response resources (DRRs), and complement short-term market price signals by encouraging resources to provide

¹⁰ We accept the Midwest Transmission Customers' December 5, 2007 answer as superseding their earlier pleading in its entirety.

¹¹ See, e.g., *Midwest Indep. Transmission Sys. Operator, Inc.*, 100 FERC ¶ 61,292, at P 7 (2002); *Duke/Louis Drefus L.L.C.*, 75 FERC ¶ 61,261, at 61,848 (1996).

additional flexibility. The Midwest ISO states that the simultaneous co-optimization market feature will minimize overall production costs through market-based procurement of energy and operating reserves compared to the current bifurcated approach, which uses a market-based procurement of energy through the energy markets and a cost-based procurement of operating reserves by a number of Balancing Authorities. The Midwest ISO expects the improved efficiencies in the proposed ASM design will be delivered at a reasonable cost and projects benefits, net of costs, of between \$88 million to \$183 million annually.

2. Comments

20. Several commenters support the proposed ASM because of the significant benefits it provides consumers and power sellers. Ameren expects that the proposal will allow for the optimization of both energy and reserve markets, resulting in lower costs. Xcel agrees that the proposal will result in reduced costs to retail and wholesale consumers. FirstEnergy asserts that market-based settlement for the procurement of ancillary services is an efficient method for the supply of ancillary services that will also encourage greater participation in the provision of these services.

21. Several commenters assert that the benefits of the proposed ASM are overstated, the cost estimates do not reflect the full costs and there is a significant risk that projected savings will not be realized.¹² Indianapolis P&L claims that the administrative costs of the energy market exceeded its benefits in the first year, and therefore the proposed ASM lacks adequate cost-benefit support and a full validation of its underlying assumptions and data, and puts members at risk for trapped costs. Midwest Transmission Customers and Southwestern recommend that the Commission conduct a full review and hearing before allowing the Midwest ISO to recover any costs associated with development and implementation of the proposed ASM. Midwest Transmission Customers argue that the Commission should provide a cost-based backstop for the first year of ASM operation by capping the revenues that can be earned by resources at an amount equal to the revenue collected under cost-based ancillary services, and provide for refunds in the event current rates result in higher revenues.

22. Similarly, Hoosier & Southern Illinois anticipate cost overruns, and they note that the Midwest ISO has not done any analysis on whether load-serving entities (LSEs) and other wholesale customers are likely to receive the claimed benefits. Thus, they urge the Commission to require the Midwest ISO to demonstrate that those who will ultimately pay will also benefit. NIPSCO agrees that the purported benefits may be overstated. The

¹² *E.g.*, NIPSCO, Michigan Power Agencies, Hoosier & Southern Illinois, Midwest Transmission Customers and Indianapolis P&L.

Michigan Power Agencies claim that there is insufficient data to evaluate the benefits associated with the ASM and object to the lack of concrete forecasts of costs expected to result from procuring operating reserves from a centralized market. Accordingly, the Michigan Power Agencies recommend that the Commission require the Midwest ISO to file additional information regarding the projected cost of the ASM, allow parties to comment on the data and reject the requested implementation date.

3. Answers

23. The Midwest ISO responds that a detailed cost-benefit study is not required under section 205 of the FPA,¹³ Order No. 2000,¹⁴ or the Commission's September 26 Order,¹⁵ which approved the Midwest ISO's phased approach to resource adequacy (including the ASM). The Midwest ISO believes that the cost-benefit analyses identified in the September 26 Order adequately demonstrate the potential net benefits of the ASM and the initial results of the ICF International study indicate potential annualized gross benefits of \$213 million.¹⁶ The Midwest ISO expects its benefit and cost projections to be reasonable and achievable based on the installation of new systems, the ongoing development of new system components and the extensive testing and training being undertaken.

4. Commission Determination

24. As an initial matter, we note that the proposed Midwest ISO ASM incorporates, and in some cases improves upon, ASM design features that have worked successfully in other ISOs and RTOs, including the PJM Interconnection, the New York ISO, ISO New England and the Electric Reliability Council of Texas. We agree with the Midwest ISO that a centralized ASM provides significant reliability and efficiency benefits and, based

¹³ The Midwest ISO states that the Commission has held that a cost-benefit analysis is not required under section 205 of the FPA, *Amer. Elec. Power Serv. Corp.*, 118 FERC ¶ 61,041, at P 18 (2007), and that there is no FPA requirement for a cost-benefit study of a change in market structure, *Sw. Power Pool, Inc.*, 116 FERC ¶ 61,289, at P 47 (2006).

¹⁴ *Regional Transmission Organizations*, Order No. 2000, FERC Stats. & Regs. ¶ 31,089 (1999), *order on reh'g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092 (2000), *aff'd sub nom. Pub. Util. Dist. No. 1 of Snohomish County, Washington v. FERC*, 272 F.3d 607 (D.C. Cir. 2001).

¹⁵ *Midwest Indep. Transmission Sys. Operator, Inc.*, 116 FERC ¶ 61,292 (2006).

¹⁶ See Midwest ISO Proposal at 18 n.72.

on the operating experience of similar ASMs in the other ISOs and RTOs, we expect those benefits will also be realized in the Midwest ISO, particularly since the Midwest ISO has designed a market that incorporates the best features of other ASMs.

25. At the same time, we understand the concern of market participants that the costs of this significant undertaking must be reasonable. We will not mandate the protesters' recommended one-time evaluation of the various estimates of costs and benefits, since cost and market performance assumptions of such a point-in-time study will change over time and the estimates can reflect outdated assumptions and may not accurately reflect how the market actually works after it starts, as commenters note. For these reasons, as well as our belief that the most useful information on the performance of the market will be based on the actual operation of the market after the market starts, we consider the task force set up by the Midwest ISO to work with stakeholders and state commission representatives to perform an ongoing analysis of costs¹⁷ to be a better venue for evaluating the costs and benefits of the ASM, thereby providing stakeholders with the most relevant information available and providing a forum to allow stakeholders to raise their concerns.¹⁸

26. Further, the Commission is not required to condition its approval of the ASM proposal on Commission approval of the Midwest ISO's cost-benefit studies. The Commission has broad authority to consider non-cost factors as well as cost factors.¹⁹ Therefore, we deny the protesters' requests to require the Midwest ISO to propose cost-based protections or to submit the underlying data and assumptions of the Midwest ISO's cost-benefit studies.

B. Stakeholder Process

27. The Midwest ISO began consulting with stakeholders regarding the ASM on March 15, 2005, and has held numerous and extensive discussions with several stakeholder sub-groups as well as regional meetings with OMS representatives. Several

¹⁷ *Id.* at 6 n.20.

¹⁸ We deny, as unsupported, the Midwest Transmission Customers' argument concerning reimbursement of market participants for integration costs since they cite no evidence in the proposed tariff, transmittal letter or testimony to corroborate their claims. However, we encourage the Midwest Transmission Customers to discuss this issue with the Midwest ISO in stakeholder discussions.

¹⁹ *See, e.g., Amer. Elec. Power Serv. Corp.*, 118 FERC ¶ 61,041, at P 18 n.33 (2007) (citing *Promoting Transmission Investment through Pricing Reform*, Order No. 679-A, FERC Stats. & Regs. ¶ 31,236, at P 39 (2006)) (internal citations omitted).

commenters such as Indianapolis P&L, Southwestern, Wisconsin Electric and NIPSCO, fault the Midwest ISO for an inadequate stakeholder process that did not achieve consensus on the proposal and did not resolve certain issues. Indianapolis P&L also notes that the stakeholder process has not yielded the requisite information to assess benefits and costs that accrue to its customers.

28. The Commission addressed the most significant gap in the stakeholder process by requiring a technical conference on market power and mitigation. With respect to the other aspects of the stakeholder process, we consider the processes put in place by the Midwest ISO for ongoing stakeholder task forces and continuing reviews to be responsive to the concerns of market participants and the best approach for ensuring that remaining stakeholder issues, such as the complexity of the proposed market, are addressed.

C. Market Power Analysis and Market-Based Rate Authorization

29. In the Guidance Order, the Commission found the Midwest ISO's initial ASM proposal deficient because it lacked a market power study in support of the proposed ASM.²⁰ The Midwest ISO states that the Commission provided guidance on how to perform the market power study, indicating that the Midwest ISO would have to provide: (1) a definition of each ancillary services product to be sold at market-based rates; (2) definitions of the relevant geographic markets, (3) estimates of both total demand for the market and total supply available for each ancillary service; (4) a calculation of market shares for each seller within each product market; (5) a calculation of Hirschman-Herfindahl Indices (HHIs) for each product market; (6) a pivotal supplier test for each ancillary service; and (7) an analysis of barriers to entry and potential competitors.²¹

1. Midwest ISO Proposal

30. The Midwest ISO explains that it engaged an IMM to perform a market power study. In defining the relevant geographic markets, the Midwest ISO states that the IMM identified eight potentially relevant geographic markets: the entire Midwest ISO region, three constrained areas and four clusters. In defining the relevant product markets, the Midwest ISO further states that the IMM identified two product categories: regulating reserves and contingency reserves. In the market power study, the Midwest ISO explains that the IMM specifically found that the Midwest ISO region does not face region-wide market power concerns, but may face market power concerns with regard to separate zonal reserve requirements. In its Affidavit, the IMM describes the market power

²⁰ Guidance Order, 119 FERC ¶ 61,311 at P 37.

²¹ *Id.* P 40-43.

monitoring and mitigation measures necessary to address such market power concerns, which were based upon and integrated with the existing Commission-accepted measures established in Module D of the TEMT.²²

2. Comments

31. Several commenters express concern regarding the potential for market power in the Midwest ISO's proposed ASM.²³ The Midwest TDUs state that high market shares, high concentration and pivotal suppliers are present in each of the seven sub-regional markets and for each ASM product (regulating and contingency reserves). The Midwest TDUs further object to the accuracy of the market power study, stating that the market power study does not discuss the frequency with which congestion increases the potential for market power exercise. The OMS states that the Midwest ISO's sub-regional analysis indicates clear evidence of the potential for the exercise of market power during a large portion of the hours examined. The Midwest TDUs state that the market power study does not fully reflect the extent of market power problems in the Midwest ISO's ASM. Midwest Transmission Customers complain that the mitigation measures would not apply outside of areas constrained by transmission or other limits, and therefore the mitigation measures are subject to gaps that facilitate the exercise of market power.

32. Several commenters object to the method used by the Midwest ISO to determine the relevant markets when conducting its market power analysis. Southwestern and Indianapolis P&L state that any market power analysis performed using the entire Midwest ISO footprint cannot yield meaningful results. Southwestern disagrees with the Midwest ISO's reliance on Order No. 697 to establish the full RTO region as the default geographic market, except in cases where the Commission has made a specific finding that a submarket exists within an RTO. Southwestern states that an independent analysis should have been conducted before such a conclusion was reached. Southwestern further objects to the use of the Midwest ISO footprint by stating that the analysis ignores that, unlike other RTOs, the Midwest ISO does not operate as a single control area.

33. Several commenters disagree with the classification of spinning reserves and supplemental reserves as perfect substitutes in the Midwest ISO's market power analysis, and argue that there is no evidence to justify this classification. Southwestern states that this is the result of a faulty assumption, and notes that not all peaking resources are capable of providing spinning reserves. The Midwest TDUs additionally state that this classification understates the structural problems in the spinning reserves market.

²² IMM Aff. at 3.

²³ See, e.g., OMS Comments at 7.

3. Answers

34. In response to the claim by Midwest TDUs that high market shares, high concentration and pivotal suppliers are present in each of the seven sub-regional markets and for each ASM product, the IMM reiterates that:

[I]mplementing the [ASM] does create market power. The conduct-and-impact framework has been shown to be effective in addressing local market power in Midwest ISO energy markets and in the energy and ancillary service markets in New York and New England....[I]t is my expert opinion that the proposed mitigation measures....will effectively address the local power issues identified in the Market Power Study.²⁴

35. In response to commenters' concerns about the potential exercise of market power during a large portion of the hours examined, as well as concerns that the market power study did not fully reflect the extent of market power problems in the Midwest ISO's ASM, the IMM states that the presence of market power in itself cannot be fatal to the proposal.²⁵ The IMM notes that Commission policy allows market-based rates in the presence of market power as long as there is proper mitigation in place.

36. The IMM dismisses as misplaced Southwestern and Indianapolis P&L's claim that any market power analysis performed using the entire Midwest ISO footprint will not yield meaningful results. The IMM also responds to CMTC's complaint that the mitigation measures would not apply outside of areas constrained by transmission or other limits, and therefore the mitigation measures are subject to gaps that facilitate the exercise of market power.²⁶

37. The IMM states that the protesters mistake the role that the sub-regional market power analysis plays in the proposal.²⁷ The IMM declares that the Market Power Study indicated both the lack of region-wide market power and the presence of substantial localized market power. The IMM states that areas in the Midwest ISO region that have no local ancillary services requirements do not face significant market power concerns. The IMM argues that, in these areas, competition should be sufficient to deter the exercise of market power. Noting that the mitigation measures are not intended to be

²⁴ IMM Aff. at 3.

²⁵ *Id.* at 3.

²⁶ *Id.* at 10.

²⁷ *Id.* at 5.

blanket regulations on price, but rather are tailored to address material market power concerns, the IMM asserts that mitigation measures should not be applied at times and in areas where market power is not a significant concern.

38. Responding to commenters who object to the segmentation of clusters and sub-regions chosen by the Midwest ISO when performing the market power analysis, the IMM states that given the presence of localized market power, a mitigation measure was proposed to address market power. The IMM further states that because of the way the mitigation measures work, they naturally adapt to changing reserve zone definitions. The reference levels are resource specific, not reserve zone specific. Hence, the IMM concludes that the mitigation measures will be fully effective as local conditions, requirements and reserve zones change.

4. Technical Conference Comments

39. Southwestern asserts that the Commission should ensure that a proper market power study is conducted before a marginal-cost based pricing system is implemented. Southwestern argues that the market power study conducted by the IMM is seriously flawed because it is based on the entire Midwest ISO footprint rather than recognizing constraints that make sub-regions down to the individual control areas the appropriate market for analysis. In fact, the OMS asserts, its own post-conference research has shown that there is substantially more market power in the ASM than in the energy markets.

40. Southwestern argues that instead of relying on Order No. 697 to conduct a market power study of the entire Midwest ISO footprint, the IMM should have conducted its own independent analysis of the Midwest ISO's ASM, which covers a vast geographic area and a number of states. Southwestern argues that use of the entire Midwest ISO footprint would have only been appropriate if the entire Midwest ISO grid faced similar transmission constraints and if the entire grid had consistent load profiles, generation patterns and network topology. Southwestern asserts that this is not the case, contending that the Midwest ISO has areas with severe transmission constraints and areas that are free of serious transmission constraints. Southwestern additionally criticizes the market power study conducted by the IMM, stating that the market power study ignores that the Midwest ISO does not operate as a single Balancing Authority and Control Area as other RTOs do.

41. In response to Southwestern's comment regarding the reliability of HHIs, the IMM explains that HHIs rely exclusively on supply-side factors, while ignoring the demand-side. It states that when demand rises, fewer alternative resources can respond by increasing output and displacing any supplier seeking to withhold resources. Hence,

markets with higher resource margins tend to be more competitive. However, both market share and HHIs neglect this aspect of the market. The IMM suggests that a pivotal supplier analysis remedies the problem.²⁸

42. Ameren describes the Midwest ISO's market power analysis as inherently conservative. Ameren argues that the IMM's market power study is flawed because it uses historical data for ancillary services. Since the IMM studied a period before an active ASM was in existence, Ameren argues, the IMM's presentation understates the amount of ancillary services that will be provided. Ameren asserts that the market will allow more ancillary services to be offered when it is sufficiently mature. Ameren further asserts that allowing sales of ancillary services at market-based rates will allow the total number of ancillary services offered to rise closer to the amount capable of being offered once a sufficient market exists.

43. Dynegy argues that Midwest ISO's pivotal supplier analysis is flawed because it fails to account for certain existing protections already in place. In particular, Dynegy argues that the pivotal supplier analysis may result in a finding of market power where it does not actually exist. Dynegy asks the Commission to direct the Midwest ISO to revise its pivotal supplier analysis for the ASM to reflect the effect of the currently effective monitoring and mitigation plan on the ASM and to provide a more accurate market power analysis. Dynegy further asserts that since the energy market is covered by the existing mitigation measures, the market power analysis for the ASM should assume that energy is competitive and, therefore, exclude the supply and demand for energy from the pivotal supplier analysis.²⁹

44. Several commenters object to the segmentation of clusters and sub-regions chosen by the Midwest ISO when performing the market power analysis.³⁰ Southwestern objects to the four clusters selected as part of the analysis, arguing that the Midwest ISO did not sufficiently justify its rationale. Midwest Transmission Customers assert that the eight geographic regions studied do not correspond with the Midwest ISO's implementation plans. Midwest Transmission Customers argue that the eight regions are, at best, a proxy for future markets, as the zones the Midwest ISO will use are not static and may change. The OMS contends that the sub-regions are the relevant markets. The OMS asserts that since a competitive market in these reserve zones does not exist, effective mitigation measures must be in place before proceeding.

²⁸ *Id.* at 12.

²⁹ Midwest ISO Proposal at 5-6.

³⁰ *See, e.g.*, Midwest Transmission Customers Comments at 8-9.

45. Several commenters argue that the Midwest ISO's approach has not been developed sufficiently to consider an ASM.³¹ Southwestern argues that it would be inappropriate to implement opportunity cost and scarcity cost-based ancillary service and operating reserve markets at this time because customers will not be fully protected from the exercise of market power. The OMS argues that it would not be appropriate to approve an ASM where suppliers are allowed to charge market-based rates unless there is a comprehensive program in place to prevent or mitigate the exercise of market power. The OMS recommends that the Midwest ISO develop a formalized approach for evaluating the accuracy and appropriateness of a submitted reference price and report the results.

46. Consumers Energy requests that the Midwest ISO correct certain purported flaws related to what areas may be defined as known congested areas. In particular, Consumers Energy's concern is focused on labeling Michigan as a known congested area and Cluster #4 as a potentially constrained area.

5. Technical Conference Reply Comments

47. In response to Southwestern's arguments, the IMM asserts that Southwestern's position indicates a fundamental lack of understanding of both Commission policy and a core component of the ASM, namely the consolidation of the primary reliability functions currently performed by the individual Balancing Authorities into one Midwest ISO Balancing Authority Area. The IMM states that it followed Commission policy that requires analysis of RTO markets on a region-wide basis in the absence of a specific finding by the Commission dictating otherwise. Further, the IMM notes that the market power study provided substantial additional details concerning sub-regions within the Midwest ISO footprint, in order to produce a fuller picture of market power potential. The IMM also states that no evidence presented in the proceeding suggests that it is necessary or even appropriate to evaluate market power in the Midwest ISO region on a control-area basis. The IMM explains that the market power study did not treat every Control Area as a sub-region because the capability of the transmission system allows those areas to satisfy their reliability needs with resources in other Control Areas. The IMM states that the market power study, in fact, appropriately evaluates the Midwest ISO Balancing Authority Area and the potential reserve zones that the Midwest ISO Balancing Authority Area would be divided into based upon future analyses. The IMM argues that it is within these reserve zones that the potential for the exercise of Market Power may exist, and that the IMM appropriately focused upon these zones in the market power study.

³¹ See, e.g., Southwestern Comments at 62.

48. In response to Ameren, the IMM notes that Ameren provides a special case where a unit incurs an opportunity cost from selling ancillary services that is not fully reflected in the clearing price. Further, the IMM notes that it agreed at the technical conference that Market Participants can submit information on legitimate opportunity costs and that such cost information will be included in the reference levels.

49. The IMM notes three flaws in Dynegy's arguments and asserts that its approach is misguided. First, the IMM states that while the mitigation measures serve to limit exercises of market power, the mitigation measures do not serve to eliminate withholding. For example, it asserts, physical withholding is addressed by *ex post* sanctions that are intended to serve as a deterrent, but the mitigation measures do not prevent a supplier from physically withholding. So, the IMM argues, even with the existing mitigation measures, it would still be possible for a pivotal supplier to withhold from the energy market in order to raise the clearing prices of ancillary services. Thus, the IMM states, it would be inappropriate to conclude that a supplier is not pivotal because a portion of the suppliers' resources (those producing energy and subject to energy mitigation) are ignored in the analysis. Second, the IMM argues that if the logic of Dynegy's argument were applied to the Midwest ISO's energy-only market, it would unreasonably bias the results of the pivotal supplier analysis in Narrow Constrained Areas by excluding large portions of a supplier's capacity even though the capacity can be physically withheld to cause a shortage. Third, the IMM suggests that even if the pivotal supplier analysis is modified as Dynegy proposes, its argument does not affect the HHI and market share results that support the same market power conclusions as the pivotal supplier analysis.

50. The IMM also responds to commenters who object to the segmentation of clusters and sub-regions chosen by the Midwest ISO when performing the market power analysis. The IMM argues that these commenters mistake the role that the sub-regional market power analysis plays in the proposal. The IMM declares that the Market Power Study indicates both the lack of region-wide market power and the presence of substantial localized market power. The IMM states that, given the presence of localized market power, a mitigation measure was proposed to address market power. The IMM further states that because of the way the mitigation measures work, they naturally adapt to changing reserve zone definitions – the reference levels are resource specific, not reserve zone specific. Thus, the IMM concludes that the mitigation measures will be fully effective as local conditions, requirements and reserve zones change.

51. In response to commenters that suggest the study is incomplete because it combines spinning and supplemental reserves jointly as contingency reserves, the IMM maintains that while the market power study indicates that some resources cannot directly provide spinning reserves, typically resources are available that can be dispatched as energy, freeing up other resources to provide spinning resources. Thus, it argues, even while some resources qualify as supplemental reserves but not as spinning reserves, the

effective substitutability of resources on the Midwest ISO system renders the two products part of a single economic market for the purposes of market power evaluation. Further, the IMM responds that Indianapolis P&L seems to misunderstand the effect of the co-optimization when it suggests that a unit dispatched for energy would not be available to be dispatched for ancillary services. The IMM notes that it is in the nature of the co-optimization process to continually consider trade-offs between the use of a resource for energy versus ancillary services. Even though a unit may be dispatched entirely for energy in one market period, the IMM explains, the unit's capability is available to provide either energy or ancillary services in the next market period, to the extent allowed by the unit's physical parameters.³²

52. In its post-technical conference reply comments, Indianapolis P&L reiterates its concern that localized market power during binding constraints is the crux of the flaw in the mitigation proposal and remains unaddressed. Indianapolis P&L asserts that, accordingly, the new data presented by the IMM miss the point.

6. Commission Determination

53. We find that the Midwest ISO's market power study is consistent with our prior guidance. The market power study identified two product categories: regulation and contingency reserves, and examined those products for eight potentially relevant geographic areas (the Midwest ISO, four clusters and three constrained areas).³³

54. When considering the entire Midwest ISO footprint as the relevant geographic market, the ancillary services product markets (regulation and contingency reserves) are unconcentrated and raise few market power concerns. However, when considering the four potential clusters and the three other constrained regions as the relevant geographic markets, the market power study identified relatively high levels of market concentration that raise market power concerns. To address these market power concerns, the Midwest ISO proposes mitigation measures. As we explain in greater detail below, we find that the proposed mitigation, as modified in this order to reflect concerns raised by the OMS and others, is an appropriate method to address the market power concerns raised. The proposed mitigation plan is an extension of the mitigation strategy successfully employed

³² IMM Aff. at 6-7.

³³ The relevant geographic markets are subject to change; this is discussed further below.

in the Midwest ISO's energy market and is similar to the mitigation measures employed in other markets.³⁴ Moreover, the proposed mitigation measures are tailored to target the market power concerns for the submarkets identified in the market power study.

55. As noted above, several commenters object to the use of the Midwest ISO footprint as a relevant geographic market. As an initial matter, we note that evaluating the Midwest ISO footprint as the default geographic market is consistent with Commission policy that the RTO/ISO market be treated as the default relevant geographic market in the absence of a specific finding by the Commission that there is a submarket within the RTO/ISO.³⁵ In the instant case, however, notwithstanding the lack of market power when using the Midwest ISO as the relevant geographic market, the Midwest ISO also provides a market power analysis examining seven smaller geographic markets (submarkets). That analysis identified market power concerns in those submarkets and proposed mitigation to address those concerns. The Commission's acceptance of the proposed ASM is based in part on the market power analysis examining these seven submarkets and is subject to mitigation measures proposed to address market power concerns in those submarkets; it is not solely based on the use of the Midwest ISO footprint as the relevant geographic market. We also reject Southwestern's objection to the use of the Midwest ISO footprint on the basis that, unlike other RTOs, the Midwest ISO does not operate as a single control area. As the IMM explains, Southwestern's argument in this regard fails to take into account the consolidation of the primary reliability functions currently performed by the individual balancing authorities into one Midwest ISO Balancing Authority Area.

56. Although a number of commenters express concern regarding the potential for market power in the analysis of the submarkets (citing high market shares, high concentration and pivotal suppliers), we believe that the mitigation proposed by Midwest ISO adequately addresses those market power concerns by targeting market power concerns identified in those submarkets. We also disagree with the Midwest Transmission Customers' argument that the mitigation measures would not apply outside of areas constrained by transmission or other limits and therefore the mitigation measures are subject to gaps that facilitate the exercise of market power. Areas outside of those constrained by transmission or other limits have not been shown to raise market power concerns. In particular, we agree with the IMM that in areas that have no local ancillary

³⁴ See, e.g., ISO New England and New York ISO.

³⁵ *Market-Based Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Public Utilities*, Order No. 697, 72 Fed. Reg. 39,904, at P 231-33 (July 20, 2007), FERC Stats. & Regs. ¶ 31,252 (2007).

services requirements, competition should be sufficient to deter the exercise of market power. In addition, the mitigation measures should not be applied at times and in areas where market power is not a concern. It is well-settled that market forces can produce just and reasonable rates in instances where market power does not exist or has otherwise been mitigated.³⁶

57. With regard to the objections of commenters to the segmentation of clusters and constrained areas identified by the Midwest ISO when performing the market power analysis, the Commission agrees with the IMM that the clusters and constrained areas are based on areas with well-identified transmission constraints. Those areas will become the reserve zones in the initial start-up of the ASM. Because of the direct transition from the current clusters and constrained areas to reserve zones in the proposed ASM, the Commission concludes that the Midwest ISO has proposed a practical framework for identifying local geographic submarkets in the ASM. In addition, the Midwest ISO proposes to update the reserve zones quarterly to identify any new submarkets that emerge or existing submarkets that shift boundaries. The Midwest ISO's proposal to update the reserve zones quarterly will help ensure that the correct local geographic submarkets are identified at any given time. The Commission therefore accepts the initial reserve zone framework and the proposal to update the reserve zones quarterly.

58. The Commission accepts the Midwest ISO's proposal to combine spinning and supplemental reserves into a single product category: contingency reserves. Although a number of commenters contend that spinning reserves and supplemental reserves are not substitutable, we find that the IMM has demonstrated that the products are effectively substitutable. As the IMM notes, the Midwest ISO has the capability to substitute supplemental reserves with spinning reserves or create spinning reserves from supplemental reserves by committing quick-start resources that would otherwise supply supplemental reserves as off-line resources.³⁷ The IMM acknowledges that while the market power study indicates that some resources cannot directly provide spinning reserves, typically resources are available that can be dispatched as energy, freeing up other resources to provide spinning resources. The IMM explains that, even while some resources qualify as supplemental reserves but not as spinning reserves, the effective substitutability of resources on the Midwest ISO system renders the two products part of a single economic market for the purposes of market power evaluation. On this basis, the Commission concludes that, for the Midwest ISO ASM, supplemental and spinning reserves are a single substitutable product referred to as contingency reserves.

³⁶ See, e.g., *Wis. Pub. Power, Inc. v. FERC*, 493 F.3d 239 (D.C. Cir. 2007) (WPP).

³⁷ Midwest ISO Proposal at 12.

59. Further, in response to Consumers Energy's request that the Midwest ISO correct certain purported flaws related to what areas may be defined as known congested areas, the Commission directs the IMM to address these concerns in its Reserve Zone Configuration Study, which is to be published before the start of the ASM.³⁸

60. Finally, the Commission accepts the IMM's offer to update and correct the power flow model.

D. Monitoring and Mitigation Plan

1. Market-Based Rates

a. Midwest ISO Proposal

61. The Midwest ISO proposes to use a conduct and impact approach to mitigate the substantial market power concerns identified in the market power analysis. The Midwest ISO argues that its mitigation measures are sufficient to address those market power risks and warrant the Commission's acceptance of market-based pricing mechanisms for the proposed ASM.

62. The Midwest ISO's proposed revisions to its monitoring and mitigation plan are given in Module D of the TEMT. The monitoring plan establishes that the IMM will monitor the markets and services provided by the Midwest ISO, including the proposed ASM. The mitigation plan imposes mitigation in the proposed ASM upon entities in constrained areas (areas in which a constraint is actively binding) that fail conduct and impact tests such that their conduct is significantly inconsistent with competitive outcomes (as indicated by conduct threshold levels) and would result in a substantial change in one or more prices in the energy market, prices in the proposed ASM, or certain make-whole payments (by exceeding impact thresholds). The proposed conduct and impact framework is very similar to the mitigation procedures approved for the Midwest ISO's energy market.

b. Comments

63. Several parties³⁹ generally support the proposed authorization of market-based rates and use of a conduct and impact framework to mitigate the potential exercise of

³⁸ *Id.* at 3.

³⁹ *E.g.*, Ameren, Beacon Power, FirstEnergy, and the OMS.

market power. However, other parties⁴⁰ disagree, arguing that the substantial sub-regional market power risks identified by the market power analysis indicate that the use of cost-based rates and/or cost-based mitigation would be more appropriate for the proposed ASM.

64. The OMS states that the Commission must consider that the market power analysis shows that the proposed ASM is rife with pivotal suppliers and potential market power abuse. Given these market power risks, the OMS contends that it is unclear that mitigation and the use of market mechanisms would be less costly for customers than using a cost-based approach. However, the OMS recognizes that “the Commission and national policy have embraced a market approach” and instead urges the Commission to approve a tighter conduct threshold for economic withholding, as discussed below.

65. Midwest Transmission Customers argue that, if the Commission permits market-based pricing authority, the high levels of market power found in the market power analysis suggest that mitigation should ensure that offers reflect units’ actual costs. Midwest Transmission Customers note that in PJM regulation service offers in zones that fail pivotal supplier tests and synchronized reserve offers are subject to unit-specific offer caps. Midwest Transmission Customers argue that cost-based mitigation of offers would be consistent with the assumptions of the cost-benefit analysis that concluded that the ASM is worthwhile.

66. Midwest TDUs suggest that the Commission should not authorize market-based rates in the proposed ASM because the market will be uncompetitive and the proposed mitigation plan will not ensure just and reasonable rates. In order to authorize market-based rates, Midwest TDUs note that the Commission must find that either the ASM is competitive or that individual utilities lack or have mitigated market power. To ensure the lowest possible rates, Midwest TDUs argue that the Commission should require the Midwest ISO to adopt cost-based mitigation, similar to that used in PJM.

67. Midwest TDUs argue that the mitigation measures have not been tailored for the Midwest ISO market because they are similar to the mitigation plans of ISO-New England and the New York ISO and do not reflect the results of the market power analysis. Midwest TDUs state that in some instances similar mitigation thresholds used in the New York ISO were too high to mitigate substantial offer price increases.⁴¹ Midwest TDUs argue that, at a minimum, the mitigation measures should be stronger in regions with high potential market power.

⁴⁰ *E.g.*, Indianapolis P&L, Midwest TDUs, Midwest Transmission Customers, and Southwestern.

⁴¹ 2006 State of the Market Report: New York ISO at 40, July 2007.

68. Southwestern argues that market-clearing prices should not be adopted and rates for ancillary services should be cost-based, unless the Midwest ISO demonstrates that the ASM is competitive and that prices are based on verified marginal costs rather than market power or speculation. Southwestern states that, in the absence of a competitive market, electricity costs have increased wherever market-based pricing mechanism have been implemented. Southwestern contends that the Midwest ISO should require suppliers to offer ancillary services at their embedded or marginal costs because the Midwest ISO's proposed use of market-based rates relies on the ability of suppliers' offers to reflect their marginal costs.

69. Southwestern argues that cost-based prices are generally preferable to market-based prices. Southwestern explains that cost-based services have been provided for decades without problems or capacity deficiencies, and contends that the use of real, transparent cost data to determine prices ensures appropriate prices. In contrast, Southwestern states that market-based prices may be vulnerable to the exercise of market power and artificially increased by the use of theoretical demand curves. Southwestern contends that there is no evidence that cost-based rates have resulted in any reduction in market participation and notes that the Midwest ISO has excess capacity.

70. Indianapolis P&L argues that the Commission cannot authorize market-based rates because the mitigation proposal is inadequate to address the high market power potential identified in the market power analysis. Specifically, Indianapolis P&L argues that the proposed conduct and impact framework cannot prevent sellers with up to 80 percent of the market share from impacting or even determining the market price because the mitigation proposal incorrectly assumes that such suppliers have only theoretical market power. Indianapolis P&L contends that the proposal mitigates the exercise of market power rather than the presence of market power, as previously required by the Commission.⁴² Indianapolis adds that the Commission has held that there is a higher likelihood that high prices result from a lack of competition, rather than a scarcity of supply, where sub-regions of an organized market are deemed non-competitive.⁴³

71. Indianapolis P&L contends that the Midwest ISO has designed the mitigation proposal to avoid over-mitigation and has not shown that it is adequate to address potential market power. Indianapolis P&L argues that the proposed mitigation scheme is not commensurate with the market power risks because the proposal is nearly identical to the mitigation plan proposed by the Midwest ISO prior to the market power analysis. Indianapolis P&L contends that the Midwest ISO also borrows the mitigation scheme

⁴² See *Cal. Indep. Sys. Operator Corp.*, 119 FERC ¶ 61,076, at P 461 (2007); see also *AEP Power Marketing, Inc.*, 107 FERC ¶ 61,018, at 61,055 (2004).

⁴³ See *Cal. Indep. Sys. Operator Corp.*, 119 FERC ¶ 61,076 at P 492.

employed for the energy markets without justifying the use of a similar program here. Indianapolis P&L explains that energy and ancillary services are markedly different products and that the ASM poses unique market power risks. Indianapolis P&L concludes that the mitigation proposal provides pivotal suppliers with instructions to extract excess rents from the market while avoiding triggering mitigation.

72. Indianapolis P&L contends that the Midwest ISO should consider alternatives to the proposed conduct and impact framework, such as the California ISO's market power mitigation design. In particular, Indianapolis P&L explains that offers are limited to unit-specific default levels for any generators that are identified as having potential market power in the California ISO. To alleviate potential over-mitigation, Indianapolis P&L notes that frequently mitigated units receive an adder to contribute to their fixed costs. Indianapolis P&L argues that the California ISO approach ensures that market power is not exercised and alleviates the risk of over-mitigation.

73. Ameren expresses concern that the mitigation thresholds may be set too low, causing over-mitigation. Ameren states that the Commission has previously recognized that over-mitigation may impair reliability, cost recovery, and price signals.⁴⁴

74. Ameren contends that the mitigation measures should be periodically reviewed to ensure that mitigation measures provide sufficient market protection without inhibiting competition or the proper workings of the marketplace. Specifically, Ameren suggests that the Commission should approve any mitigation measures for only a one-year period and require Midwest ISO to submit a filing to modify or extend its mitigation procedures. Ameren argues that this periodic review would provide a determination of whether the Midwest ISO's mitigation measures are effective or needed once market participants have gained experience in the Midwest ISO's ASM environment. Ameren states that this procedure would be similar to the Commission's initial approval of mitigation in the Midwest ISO's energy markets.⁴⁵

c. Answers

75. The Midwest ISO states that the proposed monitoring and mitigation plan is largely premised upon the Commission-approved processes successfully utilized in the energy markets. Given the fundamental similarities in the structure of the energy and ancillary services markets, the Midwest ISO states that it is unclear why some parties

⁴⁴ See *Midwest Indep. Transmission Sys. Operator, Inc.*, 108 FERC ¶ 61,163, at P 316 (2004) (TEMT II Order), *order on reh'g* 109 FERC ¶ 61,157, at P 221 (2004) (TEMT II Rehearing Order).

⁴⁵ TEMT II Rehearing Order, 109 FERC ¶ 61,157 at P 227.

desire correspondingly dissimilar mitigation measures. The Midwest ISO and IMM argue that the efficacy of the proposed conduct and impact framework has been demonstrated in the New York ISO and ISO-New England. The IMM notes that the New York ISO and ISO-New England have localized requirements for the procurement of operating reserves similar to those of the Midwest ISO. Given its track record of success, the Midwest ISO and IMM conclude that the proposed mitigation measures will be effective in addressing the exercise of market power.

76. In response to concerns that the proposed mitigation measures are not responsive to the market power analysis' findings, the Midwest ISO and IMM respond that the analysis tended to confirm rather than overturn existing expectations about the existence of market power in the proposed ASM. They add that the analysis' findings did not provide any reason to expect that the proposed mitigation framework would be ineffective.

77. The Midwest ISO argues that its desire to balance over-mitigation and under-mitigation is appropriate. The Midwest ISO explains that, while under-mitigation can result in the unfettered exercise of market power, over-mitigation impairs reliability, appropriate cost recovery, and the market's ability to send proper price signals. The Midwest ISO argues that such cost-based thresholds do not adequately consider suppliers' opportunity costs. For example, such thresholds may result in less efficient day-ahead commitment, especially when real-time shortages are expected, if suppliers' day-ahead offers cannot reflect the cost of forgone real-time shortage prices.

d. Technical Conference Comments

78. The Midwest ISO states that its proposed mitigation measures are comparable to current measures employed by the New York ISO. As indicated by the market power analysis, the Midwest ISO explains that the ASM should be very competitive on a market-wide basis when no locational constraints are binding. The Midwest ISO notes that locational constraints infrequently bind in other markets due to excess available reserves in the local areas and the same is likely to be true in the Midwest ISO.

79. The Midwest ISO explains that its conduct and impact approach minimizes intervention in the market by limiting mitigation to only cases where a supplier is withholding capacity and raising prices. The Midwest ISO argues that it may be difficult to establish a cost-based rate for ancillary services and that such mitigation can serve as a barrier to entry for new suppliers. In addition, when the cost-based rate is lower than a supplier's perceived costs and no other tests are applied to limit mitigation, the supplier is likely to exit the market.

80. Contrary to its previous comments in support of cost-based rates, Midwest TDUs state that it supports market-based rates and conduct and impact mitigation because the Midwest ISO clarified that it will determine a unit's reference levels based only on offers

submitted under competitive market conditions. However, Midwest TDUs state that their support is conditional on the lowering of the mitigation thresholds to a more reasonable measure of the uncertainty associated with calculating a unit's reference level, such as \$7.50 per megawatt hour (MWh), as discussed below.

81. FirstEnergy supports the proposed mitigation measures as a reasonable assurance that the proposed ASM will have just and reasonable prices. FirstEnergy adds that the IMM's responses to commenters' concerns allayed any concerns regarding the adequacy of the proposed mitigation measures.

82. Indianapolis P&L reiterates its arguments that market-based prices should not be utilized because the proposed ASM would not be competitive, especially in load pockets with local reserve obligations. Indianapolis P&L contends that the Commission should not authorize market-based rates because the market power analysis indicates substantial market power risks. Indianapolis P&L contends that the Midwest ISO has not justified allowing dominant suppliers to set market prices in constrained areas or considered alternative mitigation proposals and the results of the market power analysis. Indianapolis P&L argues that the Midwest ISO should consider using the mitigation measures employed in the California ISO and the New York ISO. In particular, Indianapolis P&L explains that the California ISO limits the offers of generators with market power to pre-established default levels that permit the recovery of fixed costs. Indianapolis P&L adds that, unlike the proposed mitigation measures, the New York ISO does not allow generators to set market prices in constrained areas and applies its conduct and impact mitigation measures when transmission constraints are not binding. Indianapolis P&L concludes that, like the New York ISO, the Midwest ISO should apply conduct and impact mitigation when transmission constraints are not binding and, when such constraints are binding, the Midwest ISO should apply more stringent mitigation measures, similar to the California ISO.

83. Southwestern argues that the Midwest ISO has not proposed any specific changes to its mitigation plan since the market power analysis was performed.

e. Technical Conference Reply Comments

84. In response to Indianapolis P&L, the Midwest ISO explains that pivotal suppliers do not necessarily have the incentive to exercise market power and that such suppliers have not been able to systematically raise clearing prices at levels below applicable conduct and impact thresholds in the energy market. The Midwest ISO notes that the OMS proposes to have the IMM periodically review offer patterns to detect such exercises of market power and contends that, if adopted, the OMS' proposal would address Indianapolis P&L's concerns. The Midwest ISO admits that its proposed mitigation measures are not identical to any other market because such measures should reflect Midwest ISO's market design and system configurations.

85. The Midwest ISO refused to compare its proposed ASM to the markets of PJM and the California ISO at the Technical Conference, but was willing to draw comparisons with the New York ISO's market. The Midwest ISO argues that it would be inappropriate to borrow the New York ISO's requirement that generators offer \$0 per MWh offers in constrained areas because, in the Midwest ISO, the penalties for failing to respond during a reserve deployment make the marginal cost of supplying reserves exceed \$0 per MWh.⁴⁶ The Midwest ISO also explains that its market design leads to a higher probability of deployment at a financial loss when the deployed output range has a marginal cost exceeding the locational marginal price, causing generators to have higher marginal costs in the Midwest ISO. Thus, the Midwest ISO concludes that requiring \$0 per MWh offers would not allow clearing prices to fully reflect the cost of reserves and would necessitate a new make-whole payment for generators that would substantially increase uplift costs.

86. Indianapolis P&L reiterates that it finds the proposed mitigation scheme insufficient in constrained areas and is concerned that dominant suppliers should not be permitted to set market prices. Indianapolis P&L also contends that the Midwest ISO did not consider the mitigation plans of other markets and is non-responsive to the Commission's requests for additional information at the Technical Conference. Indianapolis P&L argues that, if the Midwest ISO did not consider the mitigation measures of PJM and the California ISO, then the Midwest ISO cannot conclude that it is most appropriate to model its mitigation design after the New York ISO. Indianapolis P&L adds that the Midwest ISO did not adequately respond to the Commission's request that it compare the pros and cons of cost-based versus conduct and impact mitigation. In addition, Indianapolis P&L contends that the Midwest ISO has not addressed the possibility of economic withholding.

87. Beacon Power argues that the proposed ASM will be sufficiently competitive to warrant the authorization of market-based rates. Beacon Power contends that, if appropriately mitigated and designed to ensure proper price signals, the proposed ASM will encourage new suppliers to enter the market, thereby increasing competition and reducing the potential for the exercise of market power.

88. Southwestern states that either rates must be cost-based or the IMM should adopt lower mitigation thresholds.

f. Commission Determination

89. We find that the proposed conduct and impact approach is an appropriate method to address the market power risks identified in the market power analysis. Therefore, we

⁴⁶ Midwest ISO and IMM Joint Technical Conference Reply Comments at 16.

accept market-based pricing for ancillary services. The conduct and impact approach minimizes interference when the markets are competitive and provides mitigation when well-defined thresholds are exceeded. The proposed mitigation plan is an extension of the mitigation strategy successfully employed in the Midwest ISO's energy market and is similar to the mitigation measures employed in other markets. Moreover, the proposed mitigation measures are tailored to target the sub-regional market power concerns identified in the market power analysis. We find that the proposed mitigation measures are commensurate with the associated market power risks and will not require the use of either cost-based pricing or alternative cost-based mitigation schemes.

90. We will not require the Midwest ISO to apply its mitigation measures when constraints are not binding. The market power analysis found that the proposed ASM will be competitive on a market-wide basis when transmission constraints are not binding. As such, it would not be appropriate to apply the mitigation thresholds unless constraints are binding. Similarly, we will not require the Midwest ISO to set the offers of dominant suppliers to \$0 per MWh. We agree with the Midwest ISO that this might interfere with the ability of market clearing prices to reflect the full cost of operating reserves. The conduct and impact framework should be sufficient to identify and mitigate offers by suppliers that are excessively high and affect market prices.

91. For the most part, commenters appear concerned that the proposed mitigation thresholds will be too high and permit the exercise of market power. While we discuss the proposed mitigation thresholds below, we conclude that these concerns do not warrant the adoption of cost-based rates.

2. Mitigation Thresholds

a. Midwest ISO Proposal

92. The proposed mitigation measures establish conduct and impact threshold levels for the proposed ASM. Under the Midwest ISO's approach, an offer is mitigated if it fails both the conduct and impact tests. An offer fails the conduct test if any part of the offer exceeds its corresponding reference level by an amount greater than the applicable conduct threshold. The conduct threshold for economic withholding will be the lower of 300 percent or \$50 per MWh, and any availability offers below \$10 per MWh will not be considered instances of economic withholding. The conduct threshold for physical withholding will be the lower of 5 percent or 200 megawatts (MW), and operating a unit in real-time at an output level of at least 90 percent of the Midwest ISO's dispatch instructions will not be considered instances of physical withholding. The conduct threshold for uneconomic production will be 50 percent of the applicable energy reference level on an output range scheduled for contingency reserves or regulating reserves when the energy offer is lower than the locational marginal price. An offer fails the impact test if it causes a change in market prices that exceeds the impact threshold. The impact threshold will be set to \$50 per MWh for the proposed ASM.

b. Comments

93. Several parties⁴⁷ argue that the proposed conduct threshold for economic withholding should be lowered by various amounts, while other parties⁴⁸ support the Midwest ISO's proposed \$50 per MWh threshold.

94. The OMS states that it is unconvinced that the \$50 per MWh conduct threshold for economic withholding affords sufficient market power protection to warrant the approval of market-based rates. The OMS contends that the proposed \$50 threshold is high enough to allow unmitigated gaming. The OMS proposes that an initial threshold of \$10 per MWh instead be used as a starting value for mitigation, and that the threshold be incrementally relaxed until it reaches \$50 per MWh only after the IMM demonstrates that market forces are sufficient to check potential market power abuse.⁴⁹ The OMS claims that a lower initial mitigation threshold is appropriate because the proposed ASM does not include a transition period of cost-based bidding. Without a tighter conduct threshold for economic withholding, the OMS argues that the net benefits of moving to a market-based ASM approach will be significantly degraded, as suggested by the market power analysis.

95. Southwestern argues that a "threshold price-based mitigation process should be implemented" instead of the conduct and impact framework proposed by the Midwest ISO. Under the Midwest ISO proposal, Southwestern notes that mitigation will not be applied "even if the offer prices exceed threshold prices, so long as the conduct and impact tests are satisfied." Southwestern acknowledges the IMM's argument that the conduct and impact framework may prevent over-mitigation. However, Southwestern contends that it is better to engage in over-mitigation than under-mitigation in a market that is not fully competitive and concludes that the threshold price test is more objective

⁴⁷ *E.g.*, Indianapolis P&L, Midwest TDUs, Midwest Transmission Customers, the OMS, and Southwestern.

⁴⁸ *E.g.*, Ameren, Dynegy, and Integrys.

⁴⁹ Specifically, the OMS proposes that the IMM report to the Commission and the OMS every 90 days and, if "fair game" behavior is reported, then the conduct threshold for economic withholding would increase by \$10 for the next 90-day period. However, if any report indicates "the exercise of market power by certain pivotal suppliers for a large number of hours in a specific operating reserve zone for a specific product," then the threshold would decrease by \$10 or be reset to the \$10 initial threshold, whichever is greater, for the relevant product in the applicable reserve zone for the next 90-day period. The OMS proposes that this procedure continue until the threshold reaches \$50 and four subsequent, consecutive reports suggest "fair game" behavior.

and best prevents under-mitigation. In addition, Southwestern argues that the IMM did not provide a rationale for allowing the conduct threshold for economic withholding in the ASM to be higher on a percentage basis than the similar threshold for the energy market.

96. Indianapolis P&L states that the economic withholding threshold is unsupported and does not appear to have been derived from any meaningful data. Indianapolis P&L argues that the economic withholding threshold of \$50 per MWh allows a seller to offer \$49.99 per MWh above its reference level without being mitigated. Indianapolis P&L states that this scenario may occur because the ASM will be highly uncompetitive and competitors will not exist to discipline offers above reference prices. Indianapolis P&L explains that this behavior will amount to a \$49.99 surcharge allocated to all load. Indianapolis P&L concludes that this threshold risks possible market inefficiencies, strategic bidding, wealth transfers, and unmitigated market power that may eviscerate any benefits of the proposed ASM.

97. Midwest TDUs contend that the IMM is overly concerned about potential over-mitigation and does not consider the potential for under-mitigation of market power exercises below the mitigation thresholds. Midwest TDUs explain that the mitigation thresholds are excessively high and address only the most egregious exercises of market power because they allow suppliers to legally offer the lesser of 299 percent or \$49.99 per MWh above their respective reference levels and raise market prices by \$49.99 per MWh without triggering mitigation.

98. Midwest TDUs contend that uncertainty in the reference levels' approximation of units' marginal costs does not justify such high mitigation thresholds. According to Midwest TDUs, the conduct mitigation thresholds should reflect the amount of uncertainty regarding whether reference levels accurately reflect generators' marginal costs. Midwest TDUs argue that marginal cost uncertainty is less applicable in the case of contingency reserves because the price of reserves should be equal to the opportunity cost of not providing energy or regulating reserves. While recognizing that the Midwest ISO may have a limited understanding of the costs of providing regulating reserves, Midwest TDUs argue that the Midwest ISO should make reasonable estimates of such costs to reduce uncertainty.

99. Midwest TDUs argue that the conduct and impact mitigation thresholds should both be reduced to \$7.50 per MWh, similar to PJM. Midwest TDUs note that the proposed \$50 per MWh conduct threshold for economic withholding would allow bigger price increases, in percentage terms, in the ASM than the corresponding \$100 per MWh threshold in the energy market. In contrast, Midwest TDUs argue that \$7.50 per MWh would allow prices to increase by a generous 50 percent before applying mitigation. For dominant suppliers in noncompetitive hours and locations, Midwest TDUs argue that

offers should be capped at marginal cost plus an uncertainty margin, such as the \$7.50 per MWh margin used in PJM, to which the Midwest ISO would add lost opportunity cost.

100. Midwest TDUs argue that the Midwest ISO's proposed use of operating reserve demand curves to set scarcity prices removes the need for high mitigation thresholds in excess of \$7.50 per MWh. According to Midwest TDUs, high mitigation thresholds allow generators to set prices above their marginal costs in order to permit them to receive scarcity prices and recover their fixed costs. Midwest TDUs observe that this method of calculating scarcity prices renders it difficult or impossible for the IMM to determine whether prices reflect market power or serve as efficient signals of scarcity. However, Midwest TDUs argue that such high mitigation thresholds are unnecessary because the Midwest ISO will use operating reserve demand curves to determine appropriate scarcity prices. Midwest TDUs explain that such demand curves provide a better means for setting scarcity prices because they eliminate the need for generators to offer above their short-run marginal costs.

c. Answers

101. While the Midwest ISO and IMM continue to support the reasonableness of the \$50 per MWh threshold, they do not object to the OMS' initial \$10 per MWh threshold and ratcheting method proposal as a means to gain market experience without excessive price risks. Midwest ISO contends that imposing the \$7.50 thresholds proposed by Midwest TDUs runs a significant risk of over-mitigating and unduly limiting competition.

102. In order to cause a significant price increase when such constraints are binding, the Midwest ISO explains that, on average, the largest suppliers would have to withhold between 52 and 89 percent of their online energy and reserves in congested areas and between 35 and more than 100 percent of their online energy and reserves in the preliminary reserve zones. Given the magnitude of withholding needed to cause a price spike, the Midwest ISO concludes that a strategy of withholding capacity to cause prices to rise by less than the \$50 per MWh threshold, in order to avoid triggering mitigation, is unlikely to be profitable in most hours.

103. In regard to the OMS' proposal, Midwest Transmission Customers request that the Midwest ISO clarify its determination of "fair game behavior," including what criteria would constitute fair game behavior and whether the IMM or the Commission would determine whether fair game behavior has occurred. The Midwest Transmission Customers state that the Midwest ISO should not be permitted to circumvent the normal approval process for proposed tariff revisions by allowing such language to be proposed for the first time via a compliance filing.

d. Technical Conference Comments

104. While the Midwest ISO expresses support for the OMS' proposal, the Midwest ISO continues to defend the appropriateness of its proposed \$50 per MWh threshold. The Midwest ISO explains that the IMM analyzed the magnitude of withholding needed to cause a price spike and found that a generator's offer would need to exceed its reference level by at least \$50 per MWh for economic withholding to be profitable during most hours. However, the Midwest ISO views the OMS' proposal as a beneficial transitional measure to increase market participants' confidence in the proposed ASM and reduce their perceived risk of higher costs arising from uncompetitive outcomes. If directed to implement the OMS' proposal, the IMM clarifies that it would determine whether "fair game" behavior has occurred by examining whether suppliers have been able to evade the mitigation measure and significantly affect market outcomes by raising their ancillary services offers by an amount that is near the conduct threshold.⁵⁰ The IMM adds that, if a new reserve zone is created, its initial conduct threshold for economic withholding will be set to the lowest threshold applied for any other reserves zones during that quarter.

105. The OMS argues that measurements of potential market power in the proposed ASM are substantially worse than similar measures taken at the start of the Midwest ISO's energy market. Indeed, the OMS states that market concentration is about two to three times higher in the ASM than the energy market. The OMS argues that this higher potential for the exercise of market power suggests that a lower conduct threshold is appropriate, consistent with the Commission's finding that mitigation should be stronger in areas with a higher likelihood of market power exercise.⁵¹ However, the OMS admits that there is no true scientific or statistical basis for choosing an appropriate conduct threshold. While admitting that uncertainty regarding generators' costs may suggest that the conduct threshold should be high, the OMS argues that the threshold should lean heavily toward zero at market start to protect end-user customers from market power abuse or other aspects of the market that may be found inadequate only after operational experience has been gained. The OMS argues that the Midwest ISO should use the OMS' proposed \$10 per MWh initial threshold with a ratcheting mechanism. The OMS adds that its proposal represents a consensus of the OMS states, the Midwest ISO, and the IMM.

⁵⁰ The IMM states that it will perform a conduct test on offers at a threshold level that is somewhat lower than the mitigation threshold and a market impact test that estimates the market impacts of mitigating such offers. If the market impacts are material, the IMM states that it would recommend that the thresholds should not be increased.

⁵¹ See TEMT II Rehearing Order, 109 FERC ¶ 61,157 at P 258.

106. Midwest TDUs state that the mitigation thresholds should be lowered to a more reasonable estimate of the uncertainty associated with the calculation of a unit's reference levels, such as \$7.50 per MWh. Midwest TDUs reiterate their previous arguments in support of the \$7.50 per MWh threshold. Midwest TDUs note that the IMM acknowledged that the proposed \$50 per MWh threshold is "arbitrary but not capricious" and argue that the IMM has not produced any empirical evidence to measure the degree of uncertainty associated with approximating units' marginal costs using reference levels and to justify its proposed threshold. In response to the IMM's critique of cost-based rates given at the Technical Conference, Midwest TDUs argue that reference levels are not cost-based, but rather they represent the sellers' own perception of their costs and risks, thereby preventing mitigation from being lower than the sellers' costs. Midwest TDUs add that reference levels allow suppliers to recover their fixed costs. In addition, Midwest TDUs argue that PJM's lack of market co-optimization does not obviate its utility as an example of the effective use of the \$7.50 per MWh threshold. Midwest TDUs reiterate their arguments that the thresholds used in the New York ISO have proven neither effective nor efficient.

107. In response to the IMM's analysis of the magnitude of withholding needed to generate a profitable price spike, Midwest TDUs respond that the IMM did not examine price impacts but rather the amount of withholding needed to cause the market to reach a shortage. Midwest TDUs explain that prices can reach uncompetitive levels without resulting in a shortage. Midwest TDUs conclude that, if the market's excess capacity could or would be dispatched only above a supra-competitive price, that capacity would not be an effective restraint on market power exercise. In addition, Midwest TDUs contend that the IMM appears to have considered how much capacity would need to be withheld to create a deficiency, rather than how much must be withheld to raise prices above competitive levels. Midwest TDUs argue that the IMM should have considered the costs of any excess capacity, to predict whether the owner of the capacity would respond to a price increase, and whether any of the capacity is owned by a competing supplier with an incentive to defeat the price increase, consistent with the Commission's Merger Policy Statement.⁵²

108. In regard to the OMS' proposal, Midwest TDUs support the use of \$10 per MWh as the mitigation threshold and note that the proposed \$10 per MWh initial threshold offers nearly as much consumer protection as the Midwest TDUs' \$7.50 per MWh threshold. However, Midwest TDUs object to the proposed ratcheting mechanism. Midwest TDUs contend that the threshold should not be permitted to increase because

⁵² *Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act: Policy Statement*, Order No. 592, 61 Fed. Reg. 68,595, 68,607 (1996), FERC Stats. & Regs. ¶ 31,044 (1996).

sellers may temporarily restrain their behavior in each quarter in order to increase the threshold during the following quarter or market conditions may not be conducive to the exercise of market power during a particular quarter.

109. Southwestern argues that the Midwest ISO has not provided a rationale for allowing higher mitigation thresholds, on a percentage basis, for the proposed ASM than the energy market. Southwestern argues that the conduct and impact tests are subjective, and that an objective “threshold price test” should instead be utilized. Southwestern suggests that threshold price mitigation would better prevent under-mitigation. Southwestern notes that the IMM is concerned solely with over-mitigation and states that it is better to over-mitigate than under-mitigate in a market that is not fully competitive.

110. To ensure that the mitigation thresholds are sufficient and do not inhibit competition or market price signals, Ameren contends that the mitigation measures should be subject to annual or other periodic reviews. In regard to the OMS’ proposal, Ameren states that it may be an acceptable alternative to the Midwest ISO’s proposed mitigation thresholds. However, Ameren contends that the Midwest ISO and the OMS proposals should be modified such that the mitigation thresholds allow a market participant to incorporate opportunity costs in its offer without triggering mitigation. Ameren observes that section 1.259 indicates that reference levels should reflect a resource’s marginal costs, including its opportunity costs and a risk component.

111. Dynegy states its objections to the OMS’ proposal and requests that the Commission direct the Midwest ISO to employ a threshold no lower than \$50 per MWh. Dynegy contends that the Midwest ISO has not supported setting the ASM economic withholding threshold below that of the Midwest ISO’s energy market or other markets, such as NYISO. Dynegy also argues that the \$10 per MWh threshold is too low because generators may not be adequately compensated for the additional operational risk assumed by serving the ASM. Dynegy adds that, in combination with the low tolerance band, increased penalties, unknown Revenue Sufficiency Guarantee (RSG) charges,⁵³ and a must offer requirement, the lower threshold may discourage participation in the proposed ASM.

112. Integrys supports the Midwest ISO’s proposed conduct and impact thresholds for at least the initial phase of the operation of the reserve markets. Integrys argues that the Commission should accept the proposed mitigation plan, subject to potential reconsideration after the ASM has been in operation and market participants have pragmatic experience in the operation of that market.

⁵³ The RSG charge assesses start-up, no-load and incremental energy costs of resources that are not recovered through the locational marginal price (LMP).

e. **Technical Conference Reply Comments**

113. The OMS reiterates its support for its proposed \$10 per MWh threshold, with a ratcheting mechanism to change the threshold in \$10 per MWh increments, and states that its proposal represents a rare consensus among itself, the Midwest ISO, and the IMM.

114. The Midwest ISO reiterates its willingness to adopt the OMS' proposal and notes that it has clarified specific criteria that would be used for the ratcheting mechanism to determine whether "fair game" behavior has been observed. The Midwest ISO contends that Dynegy's comments regarding the low tolerance band are outside the scope of the Technical Conference and notes that the economic and physical withholding thresholds are not intended to apply to offers that reflect a unit's actual physical capabilities and that generators have an opportunity to present appropriate cost data to the IMM. In response to Ameren's concerns about opportunity costs, the Midwest ISO notes that the opportunity costs of providing a particular service would generally be reflected in its price and notes that market participants may submit information about their opportunity costs to the IMM for consideration when determining reference levels.

115. The Midwest ISO argues that the OMS' proposed initial threshold of \$10 per MWh and the ratcheting mechanism should address Midwest TDUs' concerns because these safeguards ensure that thresholds will not increase if markets are not sufficiently competitive to support higher thresholds. The Midwest ISO argues that the Midwest TDUs' proposed \$7.50 per MWh threshold may inappropriately mitigate competitive offers because sellers' marginal costs can fluctuate based on rapidly changing market conditions, such as unplanned outages, penalties for failing to deploy, and the costs of being deployed when market prices are lower than the marginal cost of increasing output, which are not known in advance nor considered when determining reference prices.

116. Midwest TDUs reiterate their argument that, when measuring the magnitude of withholding needed to produce a profitable price spike in defense of its proposed \$50 per MWh threshold, the Midwest ISO examined the amount of capacity that would need to be withheld to produce a shortage rather than to increase market prices. Midwest TDUs also argue that their \$7.50 per MWh threshold is not arbitrary because it represents a justifiable estimate of the uncertainty associated with calculating marginal costs. In addition, Midwest TDUs request that, if the OMS' proposed ratcheting mechanism is adopted, the Midwest ISO should lower its mitigation threshold if the IMM finds that sellers have increased their offers under higher thresholds, compared with their offers submitted under lower thresholds, absent evidence that sellers' costs have increased. Midwest TDUs also argue that the IMM's assessments of "fair game" behavior should be publicly available, to allow consumers to bring concerns about the IMM's studies to the Commission's attention.

117. Southwestern states that it concurs with the comments of Midwest TDUs and their \$7.50 per MWh proposal and notes that a lower threshold will ensure that Midwest ISO will more closely monitor the market and intervene to protect customers. Alternatively, if the Commission does not accept Midwest TDUs' proposal, Southwestern states that it is not opposed to the OMS' proposed \$10 per MWh threshold but that it opposes incremental increases to \$50 per MWh. Southwestern argues that the proposed ASM should have a lower threshold than the energy market because ASM prices are supposed to be lower than energy prices. Southwestern requests that the results of the conduct and impact tests be filed with the Commission and made public to increase the knowledge of market participants and market transparency. In response to Ameren, Southwestern argues that market participants should recover opportunity costs only if they lack the ability to exert market power. Southwestern also argues that the IMM should have responded to the Commission's request that it compare its mitigation program to that of the California ISO and PJM.

118. Indianapolis P&L reiterates its arguments that the proposed ASM design allows generators with extremely high market shares to exercise market power without appropriate mitigation because suppliers may withhold at offer prices just below the proposed \$50 per MWh threshold level. Indianapolis P&L states that it will not address the OMS' proposal unless the Commission accepts it and until the Midwest ISO files to amend its proposal.

119. Dynegy reiterates its support for the \$50 per MWh threshold and urges that a lower threshold, such as the OMS' proposal, should be rejected. Dynegy argues that the Midwest TDUs' proposed \$7.50 per MWh thresholds are essentially cost-based mitigation and will inadequately compensate generators for the additional operational risk associated with the ASM. Dynegy adds that the Midwest TDUs' proposal represents a significant and unjustified departure from the thresholds utilized in the New York ISO, which is the most similar market to the proposed ASM. Dynegy argues that comparisons to PJM should not be made because PJM's markets are not analogous to the Midwest ISO's co-optimization with its energy market. Dynegy adds that, if the threshold is lowered, market participants will not be indifferent between dispatch in the energy market and ASM. In response to Indianapolis P&L's arguments that the proposed mitigation measures are inadequate, Dynegy argues that similar measures have worked effectively in other markets and that any seller attempting to extract excessive revenue would most likely price itself out of the market entirely.

120. Integrys reiterates its support for the proposed \$50 per MWh thresholds, noting that more stringent mitigation thresholds may deprive existing suppliers of appropriate compensation to recover their fixed costs and may discourage new suppliers from entering the market. Integrys adds that the market power analysis presents an unrealistically high estimate of potential market power because it does not recognize that co-optimization allows generation offers in the energy market to serve the proposed

ASM. Integrys also argues that the proposed ASM should not be compared to the California ISO, the New York ISO, and PJM because these other markets allow at least some generators to recover a portion of their fixed costs through their capacity markets.

f. Commission Determination

121. We find that the proposed mitigation thresholds are appropriate and we note that the proposed thresholds are similar to those used in other markets, including the Midwest ISO's energy market. As the United States Court of Appeals for the D.C. Circuit in *WPPI* explained in upholding the Commission's mitigation plan for the energy market, "[Midwest ISO] market power mitigation [involves] striking a balance between, on the one hand, detecting and dampening exercises of market power and, on the other hand, allowing generators to charge prices that are high enough for them to recover their fixed costs."⁵⁴ Mitigation therefore must "reflect an appropriate trade-off between the interests of buyers and sellers – and, of course, setting a just and reasonable rate necessarily 'involves a balancing of the investor and the consumer interests.'"⁵⁵ In this case, we also find that, as conditioned, that the MISO's market power mitigation plan provides such a balancing of interests. The plan both protects consumers from market power, while also avoiding over-mitigation that can cause reliability problems to the extent that it keeps capacity out of the market over the longer term. Moreover, when higher offers reflect higher costs, over-mitigation may penalize suppliers that try to resolve constraints.

122. While we find generally that the \$50 per MWh conduct threshold for economic withholding correctly balances under-mitigation and over-mitigation, the initial months of this new market's start-up warrant a more cautious approach to mitigation. We therefore will require that the threshold be lowered during an initial, transitional period, consistent with the OMS' recommendations. However, we are concerned that the proposed ratcheting mechanism permits the IMM to exercise undue discretion in its determination of whether "fair game" behavior has been observed. As the Court held in *WPPI*, "the power conferred on the monitor to impose mitigation is a substantial one, and it accordingly is reasonable for FERC to limit the discretion to use that power."⁵⁶ We will therefore require that the Commission determine any appropriate responses, including possible modification of the mitigation thresholds.

123. In particular, we will require that the conduct threshold for economic withholding be the lower of \$10 per MWh or 300 percent of the reference level at market start. Every

⁵⁴ *WPPI*, 493 F.3d at 262.

⁵⁵ *Id.* (quoting *FPC v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944)).

⁵⁶ *Id.* at 264.

90 days thereafter, the threshold will increase by \$10 increments until \$50 per MWh is reached unless the IMM finds market behavior that warrants keeping the threshold constant for the next 90 days. We will require the IMM to file, 30 days prior to the end of each quarter, a quarterly report indicating whether market power is being appropriately mitigated and whether the next \$10 increase should go into effect as scheduled. In the event the IMM recommends keeping the threshold constant in its report, the Commission will issue an order that, based on IMM reports and parties' comments, determines whether to reinstate the incremental increases upon the expiration of the following 90-day period. In essence, this will delay the increase in the thresholds for a time period to allow the Commission to determine whether a further increase is warranted and to consider the views of all interested parties. We will require the Midwest ISO to submit revised tariff sheets to reflect this procedure in a compliance filing to be submitted within 30 days of the date of this order.

3. Reference Levels

a. Midwest ISO Proposal

124. Under the Midwest ISO's proposed revisions to section 64.1.4 (Reference Levels) of its tariff, conduct thresholds are added to reference levels for an individual generator to determine if it is behaving competitively. Reference levels are based upon estimates of a generator's marginal costs, including legitimate risks and opportunity costs. The tariff sets three methods (in order of application) for calculating a unit's reference levels: (1) offer-based, (2) price-based, and (3) consultative. The offer-based method uses the lower of the mean or median of a unit's accepted offers in competitive periods over the previous 90-days for similar hours, adjusted for fuel prices. The price-based method uses the mean of the market clearing price at the unit's location during the lowest priced 25 percent of the hours that the unit was dispatched over the previous 90 days for similar hours (i.e., peak or off-peak), adjusted for changes in fuel prices. The consultative method determines the level by consultation with the market participant in question, and is intended to reflect a unit's marginal costs, including legitimate risks and opportunity costs, or justifiable technical characteristics for physical offer parameters, provided such consultation has occurred prior to the occurrence of the conduct being examined. If sufficient data do not exist to allow calculation of a reference price based on the first two methods and the third is not applicable, or an attempt to determine a reference level in consultation with the market participant has failed, the IMM shall determine the reference level on the basis of: (1) the IMM's estimate of the costs of a Generation Resource or its technical characteristics; or (2) an appropriate average of competitive offers of one or more similar generation resources.

125. When the market begins operation, there will be no history of accepted offers or market clearing prices. Thus a transitional mechanism for the determination of appropriate reference levels will be needed. As provided in the tariff, the IMM proposes

to develop a consultative reference level for each supplier. For units not submitting appropriate data, the IMM will estimate their variable production costs from publicly available data or set their reference levels based on an average of similar units.

b. Comments

126. Several commenters⁵⁷ request clarification regarding the IMM's method of calculating generators' reference levels. In addition, some parties⁵⁸ express concern that the ability of the conduct threshold to detect the exercise of market power may erode over time due to reference level price creep.

127. The OMS expresses concern regarding the accuracy of establishing a reference price for each generation unit. The OMS recommends that the IMM develop a formalized approach for evaluating the accuracy and appropriateness of a submitted reference price and report the results to the Commission and the OMS.

128. Ameren and Duke request clarification of the IMM's procedure for setting initial reference levels. Ameren argues that the IMM should work with market participants to make sure that the initial reference levels are reasonable and accurate. Ameren and Duke state that the energy market commenced with similarly vague procedures and cautions that the resultant confusion should be avoided here. In particular, Duke recommends that the IMM's method to calculate initial reference levels and the types of allowable costs should be documented and communicated well in advance through either a Commission filing or inclusion in the Business Practice Manuals. Duke adds that asset owners must be given sufficient time to challenge their initial reference level determinations, if necessary, prior to start of the ASM and that these details should be filed before the Commission acts on the Midwest ISO's proposal.

129. Midwest Transmission Customers request that the Commission direct the Midwest ISO and IMM to specify their method to determine initial reference levels to reflect the actual costs of reserve availability offers. Midwest Transmission Customers argue that, while energy offers reflect short-run marginal costs, there are no actual incremental costs that would need to be captured through generation resources' availability offers. Midwest Transmission Customers conclude that the Commission would improperly delegate its authority to the IMM and permit unbridled IMM discretion unless the IMM's method is explained and included in the tariff.

⁵⁷ *E.g.*, Ameren, Duke, Midwest TDUs, Midwest Transmission Customers, and the OMS.

⁵⁸ *E.g.*, Midwest Transmission Customers, the OMS, and Southwestern.

130. The OMS and Midwest Transmission Customers contend that the ability of the conduct threshold to detect the exercise of market power may erode in the long-term due to reference level price creep.⁵⁹ The OMS argues that reference level price creep will erode any ratepayer benefits derived from the proposed market-based ASM. Therefore, the OMS recommends that the Commission direct the Midwest ISO and IMM to provide a detailed discussion of how the IMM intends to monitor this price creep phenomenon, as well as any subsequent findings, in each of the 90-day reports to the OMS during the first year of ASM implementation. Midwest Transmission Customers note that, in order to prevent price creep, the IMM supported the New York ISO's requirement that reference prices be the lower of a supplier's actual historical offers or \$2.52 per MW. Midwest Transmission Customers add that the Midwest ISO should not have less mitigation than the New York ISO because the market power study indicates that the Midwest ISO has higher supplier concentrations. Midwest Transmission Customers request that the Commission require that the mitigation measures reflect suppliers' actual costs or, alternatively, that reference levels more reasonably approximate variable costs and prevent price creep in a manner similar to the New York ISO.

c. Answers

131. The Midwest ISO contends that the Business Practice Manuals are the appropriate vehicle for documenting and communicating to market participants its process for determining initial reference levels. The Midwest ISO argues that calculating reference levels based on past offers is more accurate than alternative estimates of suppliers' costs. The Midwest ISO adds that marginal costs are especially difficult to quantify for ancillary services and that basing reference levels on suppliers' own estimates removes this uncertainty.

132. The Midwest ISO agrees with the OMS's assertion that monitoring for price creep is reasonable and would allow more stringent rules to be implemented if price creep is observed. However, the Midwest ISO argues that it is not appropriate to implement a backstop reference level price at this time. While noting that such a backstop reference level was needed in the New York ISO to prevent suppliers with large market shares from increasing their reference levels, the Midwest ISO argues that its markets do not have a supplier with a similarly large market share with respect to region-wide ancillary services requirements. The Midwest ISO also explains that it would be difficult for a resource to engage in a strategy to profitably increase its reference levels because offers that clear the market to satisfy local operating reserve requirements will not be used to

⁵⁹ The parties explain that reference level price creep occurs when suppliers with market power increase their offer prices by amounts that intentionally do not trigger the mitigation thresholds. This strategy would, over time, increase the reference level used for future conduct tests.

calculate reference levels. Instead, only offers that clear the market to satisfy Midwest ISO ancillary services requirements are used to calculate reference levels, such that suppliers would risk not clearing the market if they raised their offers under such competitive conditions.

d. Technical Conference Comments

133. In response to commenters' requests for clarification regarding the IMM's method for determining initial reference levels, the Midwest ISO reiterates its belief that the Business Practice Manuals are the appropriate vehicle for documenting and communicating such details to market participants. When calculating a unit's reference level, the Midwest ISO explains that the IMM will consider only offers made under competitive conditions. According to the Midwest ISO, when calculating a unit's reference level the IMM would not consider offers accepted when a transmission constraint into a BCA or NCA is binding, when a local reserve zone constraint is binding, or when a generator is dispatched or committed out-of-merit for reliability reasons.

134. The Midwest ISO argues that it does not believe a backstop reference level is warranted at this time, even in sub-markets with only one or two suppliers, but concedes that it may be appropriate to consider such a measure in the future, after the IMM has gained sufficient experience and historical information to assess whether reference levels are being overstated. The Midwest ISO also asserts that such a backstop reference level might be difficult to set, particularly for regulating reserves where costs can vary widely.

e. Technical Conference Reply Comments

135. Midwest TDUs support the Midwest ISO's proposed clarification that it will consider only offers made under competitive conditions when determining a unit's reference level. They request that the Commission direct the Midwest ISO to include this information in its Business Practice Manuals.

136. Southwestern argues that it does not understand the Midwest ISO's reluctance to implement a backstop reference level, especially in areas with one or two suppliers because such areas have little or no competition and are vulnerable to the abuse of market power.

f. Commission Determination

137. We will accept the Midwest ISO's proposed method of determining reference levels, subject to further modifications, to be submitted in a compliance filing within 30 days from the date of this order. The Midwest ISO's proposed method of determining suppliers' reference levels is consistent with similar, Commission-accepted measures

currently used in the Midwest ISO's energy market.⁶⁰ However, we will direct the Midwest ISO to revise its proposed tariff to reflect that it will only consider offers made under competitive conditions when determining a unit's reference level. In addition, section 64.1.4.c of the Midwest ISO's tariff provides that reference levels in the Midwest ISO's energy market may vary over the output range of a generator, recognize ambient temperature conditions, and consider seasonal factors. We will require the Midwest ISO, in its compliance filing, to explain whether or not similar provisions should apply to the proposed ASM and, if so, include appropriate tariff revisions.

138. We find that section 64.1.4 of the Midwest ISO's tariff, as modified herein, contains sufficient clarification of the Midwest ISO's method for determining a generation resource's initial reference level and we will not require the Midwest ISO to make additional revisions at this time. Sections 64.1.4.a.iii and 64.1.4.e of the Midwest ISO's tariff provide for consultations between the IMM and market participants to provide additional information and revise a unit's reference levels, as appropriate. Such consultations may be initiated by either the IMM or market participants. Further, section 64.1.4.a.iii states that the IMM will determine a unit's reference level prior to the application of any conduct tests, which should ensure that market participants have an opportunity to submit appropriate cost data and consult the IMM prior to the application of mitigation. We suggest that the Midwest ISO work with its stakeholders and provide additional clarification and documentation, as appropriate, in its Business Practice Manuals.

139. Finally, we find that current information does not suggest that a backstop reference level is necessary for the proposed ASM and we will not require the Midwest ISO to implement a backstop reference level at this time. To determine a generation resource's reference level based on its historical offers, the IMM will only consider offers accepted under competitive market conditions when there is not a local reserve zone obligation. If the IMM cannot find an appropriate reference level based on a unit's historical offers, then the IMM will determine a reference level using one of a series of alternate methods,⁶¹ which may include the application of a cost-based reference level. We note that these alternate methods to determine a unit's reference level are not offer-based and, thus, are not vulnerable to reference level price creep. Furthermore, the initial threshold of \$10 per MWh, with increases in \$10 per MWh increments, will allow the IMM to detect efforts to inappropriately increase a unit's reference level. We will require the IMM to monitor to detect and report any such behavior in its quarterly reports. In addition, if the IMM detects any such behavior in the future, the Midwest ISO may recommend an appropriate remedy in a future filing.

⁶⁰ TEMT II Rehearing Order, 109 FERC ¶ 61,157 at P 304.

⁶¹ See *supra* P 124.

4. Physical Withholding & Audits

a. Midwest ISO Proposal

140. In proposed section 53.1A of its tariff, the Midwest ISO proposes to audit generation resources in order to prevent and discern the exercise of market power through physical withholding in the energy market and proposed ASM. Specifically, the IMM will audit conduct or activities, including generator forced outages and de-ratings, that the IMM reasonably believes may potentially reduce the available supply and raise prices for energy or ancillary services. Any such conduct will be subject to the tariff's mitigation measures and reporting requirements.

141. Section 64.1.1 of the Midwest ISO's tariff provides the thresholds for identifying physical withholding. Withholding more than the lower of 5 percent or 200 MW of the total capability owned or controlled by a market participant or its affiliates or operating a unit in real-time at an output level that is less than 90 percent of the Midwest ISO's dispatch instructions for the unit will be deemed physical withholding. These thresholds are applicable to both the energy market and proposed ASM.

b. Comments

142. The OMS urges the Commission to require the IMM to provide a more formal and detailed explanation of the specific method and criteria that it intends to employ during the proposed audits to identify suppliers that physically withhold power in both the energy and ancillary services markets.

143. Ameren notes that proposed section 40.3.4.iii provides that the Midwest ISO may report to the Commission and IMM a market participant's failure to deliver contingency reserves if the Midwest ISO believes that the market participant is inaccurately reporting the physical capability of the resource to provide contingency reserves. Ameren argues that the Midwest ISO should detail what process it will undertake to determine whether a market participant is accurately reporting the physical capability of a resource. Ameren adds that this process should include opportunities for the market participant to discuss with the Midwest ISO the events in question, including a review of the data used by the Midwest ISO.

144. Midwest Transmission Customers note that, per the conduct threshold in section 64.1.1.a.ii, output levels that are less than 90 percent of the Midwest ISO's dispatch instructions will be considered physical withholding. Midwest Transmission Customers request that the Commission require the Midwest ISO and IMM to lower this threshold consistent with a tolerance band of plus or minus 4 percent. Midwest Transmission Customers argue that the tolerance band prevents generating units from being dispatched and paid for regulation service without physically moving.

145. Wisconsin Electric argues that the market design allows real-time up-ramp and down-ramp rate offer parameters to be gamed. For example, Wisconsin Electric explains that a market participant can set energy price pairs at a high price with a high up-ramp rate and a low down-ramp rate, such that the unit would be dispatched up quickly during a market price spike but be dispatched slowly down after the price spike subsides. In this example, the resource may receive excessive make-whole payments while following the Midwest ISO's dispatch instructions. To address this concern, Wisconsin Electric recommends that the Midwest ISO require that real-time up-ramp rates be equal to or lower than real-time down-ramp rates, including ramp rates embedded within dispatch bands.

c. Answers

146. In response to commenters' requests for additional information regarding the proposed audits for physical withholding, the Midwest ISO argues that additional clarification in the tariff could have the unintended consequence of restricting the IMM's activities when performing audits. To avoid this unintended consequence, the Midwest ISO suggests that any additional details be provided through the Business Practice Manuals.

147. The Midwest ISO states that physical withholding tests apply to ramp rates as well as limits. The Midwest ISO explains that in the current energy market some of the overall capacity and ramp capability of a resource are withheld to enable them to carry and deploy regulating reserves and/or spinning reserves. The proposed ASM will remove the need to withhold this capacity and ramp capability, such that network resources will be expected to offer their full limits and ramp capability to the day-ahead energy and operating reserves markets and during the RAC processes occurring prior to the operating day.

148. While recognizing Wisconsin Electric's concerns regarding ramp rate gaming, the Midwest ISO suggests that its current mitigation measures are adequate to address such behavior. The Midwest ISO explains that it can mitigate ramp rate parameters that deviate from a unit's physical capability or refer such behavior to the Commission for enforcement. The Midwest ISO adds that it would rather reform market incentives for such behavior rather than constrain offer parameters.

d. Technical Conference Comments

149. The Midwest ISO clarifies that the IMM would conduct both paper audits and full audits, including site visits, to determine why a generating unit was unavailable to the market. Midwest ISO explains that the criteria that would determine whether a resource physically withheld includes: (1) whether the unit was technically capable of running; (2) whether the unit was economic to run, which considers the opportunity costs of taking

the outage at a different time and other risks and costs; and (3) the unavailability of the unit resulting in substantially higher energy market or ASM prices. The Midwest ISO explains that the same evaluation would occur during periods of scarcity.

150. The Midwest ISO clarifies that its procedure for conducting audits of a unit's physical operating parameters would be similar to its procedure for evaluating outages and de-ratings. Specifically, the Midwest ISO explains that the IMM would evaluate whether a unit is technically capable of operating more flexibly or responsively than the offer parameters indicate, whether it is economic for a supplier to operate more flexibly or responsively, and whether the offer parameters contribute to substantially higher locational marginal prices or market clearing prices. The Midwest ISO states that it will provide additional detail and formalize its audit process in the Business Practice Manuals.

e. Commission Determination

151. In general, we find that the audits proposed in section 53.1A of the Midwest ISO's tariff are an appropriate expansion of the IMM's current market monitoring methods to further prevent and detect physical withholding. While we understand the Midwest ISO's concern that it does not want to undermine the efficacy of its audits by providing market participants with excessive information about its auditing process, further transparency is important to build market participants' confidence in the fairness of the auditing process and prevent undue discretion by the IMM. To ensure that the auditing process is performed in a just and reasonable manner, we will require the Midwest ISO to provide additional clarification and tariff revisions in a compliance filing to be submitted within 30 days of the date of this order, as discussed below.

152. Proposed section 53.1A requires the IMM to "audit Generator Forced Outages, Generator de-ratings, or other conduct or activities." We are concerned that "other conduct or activities" could encompass a broad range of behavior and we will direct the Midwest ISO to provide more specific language that includes all of a unit's offer parameters that could be physically withheld. In particular, the language should be revised to better define the physical withholding activities that the IMM will attempt to identify. We also direct the Midwest ISO to revise section 53.1A to define the specific types of information that the IMM may request from market participants during an audit, including any information that is not explicitly provided in sections 54.1 and 61.1 of the Midwest ISO's tariff.

153. In addition, we direct the Midwest ISO to remove the phrase "of Ancillary Services" from the title of proposed section 53.1A to reflect that the audits apply to conduct in both markets.

154. The Midwest ISO's proposed section 53.1A states that "any such conduct shall be subject to the mitigation measures and reporting requirements set forth below in this Module D of the Tariff." We are concerned that the section does not provide thresholds,

even by reference, that the IMM will apply to determine whether the mitigation measures should apply. We direct the Midwest ISO, in a compliance filing to be submitted within 30 days of the date of this order, to either provide specific thresholds or revise the language such that any such conduct shall be subject only to the Commission referrals provided in section 53.3 of its tariff.

155. Finally, we find that the thresholds for identifying physical withholding in section 64.1.1 are appropriate to address potential gaming of a unit's ramp rates or other offer parameters. The 90 percent threshold for determining whether a unit is following dispatch instructions that is currently used in the energy market is appropriate for the proposed ASM, and we will not tighten it to 96 percent to match the proposed tolerance band.

5. Mitigation in Reserve Zones

a. Midwest ISO Proposal

156. The Midwest ISO proposes to apply mitigation in two types of electrical areas: Narrow Constrained Areas (NCAs) and Broad Constrained Areas (BCAs). NCAs are areas that are potentially more subject to the exercise of market power abuse and are subject to more stringent thresholds for mitigation. BCAs will not be identified in advance by the IMM, but will be defined dynamically when constraints arise on flowgates.

b. Comments

157. Several parties express confusion or concern regarding the application of mitigation in BCAs and NCAs versus the proposed quarterly definition of reserve zones and local reserve obligations.⁶²

158. The OMS expresses concern that reserve zone changes may compromise the integrity of the proposed conduct and impact tests. Because the composition of the reserve zones may change on a quarterly basis, the OMS notes that a supplier located in one reserve zone during a particular quarter may be located in an alternative reserve zone during the following quarter. In such a scenario, the OMS questions the appropriateness of applying a conduct test based on the supplier's historical offers in the first reserve zone to an alternative reserve zone during the following quarter. When a supplier changes reserve zones, the OMS proposes that a unit's historical cost-based average instead be used as its reference price.

⁶² *E.g.*, Midwest TDUs, Midwest Transmission Customers, the OMS, and Wisconsin Electric.

159. Wisconsin Electric argues that defining reserve zones quarterly may increase gaming opportunities. Wisconsin Electric contends that defining reserve zones quarterly will increase the granularity and quantity of reserve zones in order to represent the most restrictive anticipated system configurations. Wisconsin Electric argues that the increased granularity reduces the number of competitors within each reserve zone, providing greater gaming opportunities that “fly below the radar” of the IMM.

160. Midwest Transmission Customers argue that the reserve zones create gaps in the application of BCA and NCA mitigation. Midwest Transmission Customers contend that it is unclear when the conduct and impact tests would apply to reserve zones because such zones have no relationship to the definition of BCAs and NCAs. Midwest Transmission Customers explain that only the \$1,000 offer cap would limit certain offers because the conduct and impact thresholds are never applied in areas without binding transmission constraints.

161. Midwest Transmission Customers explain that reserve zones define a population of generation resources to satisfy a local reserve obligation and that, as long as the reserve obligation exists, such suppliers may be pivotal regardless of whether a transmission constraint is binding. They argue that the mitigation thresholds should apply in reserve zones to prevent such pivotal suppliers from exercising market power. Alternately, Midwest Transmission Customers contend that the Midwest ISO could instead remedy this situation by revising its tariff to relax the local reserve obligation to zero on a daily basis if transmission constraints are not binding.

162. Midwest TDUs request that the Commission require the Midwest ISO to clarify when the proposed mitigation measures will apply. They explain that, while the proposed tariff sheets indicate that mitigation may apply when transmission constraints bind in BCA and NCAs,⁶³ the IMM’s affidavit and market power analysis suggest that the mitigation thresholds will apply when transmission constraints create local reserve zones. Midwest TDUs assert that proposed section 63.4.2.c references “Reserve Zone” constraints in a section discussing BCA mitigation, but no language appears to explicitly provide for mitigation in reserve zones.

c. Answers

163. In response to the Midwest TDUs, the Midwest ISO states that it agrees that the proposed ASM mitigation measures should apply to the reserve zones and, upon direction of the Commission, will make revisions in a compliance filing.

⁶³ Midwest TDUs state that proposed sections 65.2.2.b and 65.3.1.d of the Midwest ISO’s tariff provide that default offers and sanctions shall only be imposed in BCAs or NCAs.

164. The Midwest ISO disagrees with Midwest Transmission Customers' argument that mitigation should apply when transmission constraints are not binding because the market power analysis suggests that areas do not face significant market power concerns unless they have local ancillary services requirements.

165. Midwest Transmission Customers argue that the Midwest ISO's proposal in its answer to apply mitigation measures within the reserve zones was not accompanied by specific tariff language and substantively alters the ASM proposal. While they agree that this change is absolutely necessary, the Midwest Transmission Customers request that the Midwest ISO clarify whether the mitigation measures will apply prospectively in a zone for all hours once the Midwest ISO defines a specific reserve zone during a given quarter or whether the mitigation measures will instead be relaxed on a day-to-day basis as the Midwest ISO redefines the reserve zonal obligation. The Midwest Transmission Customers state that the Midwest ISO should not be permitted to circumvent the normal approval process for proposed tariff revisions by allowing such language to be proposed for the first time via a compliance filing. At the minimum, Midwest Transmission Customers argue that commenters should have the opportunity to contest the Midwest ISO's responses on this issue in its future compliance filing.

d. Technical Conference Comments

166. Midwest TDUs request that the Commission direct the Midwest ISO to clarify the relationship between reserve zones, BCAs, and NCAs.

e. Commission Determination

167. There is an apparent discrepancy between the proposed tariff sheets, which indicate that mitigation will be applied in BCAs and NCAs, and the Midwest ISO's and IMM's explanation of the mitigation measures, which suggest that they apply in constrained reserve zones. The Midwest ISO has agreed that mitigation measures should apply within reserve zones. We believe that applying mitigation to reserve zones should address commenters' concerns regarding the additional gaming opportunities posed by local reserve obligations within reserve zones. As such, we will direct the Midwest ISO to submit a compliance filing within 30 days of the date of this order with proposed tariff revisions that reflect the additional imposition of mitigation to constrained reserve zones. We also require the Midwest ISO to clarify, in its compliance filing, the relationship between mitigation within BCAs, NCAs, and reserve zones, including whether the three types of mitigation may overlap and apply to the same electrical area(s). We further require the Midwest ISO to address in that compliance filing whether reference levels need to be adjusted in the event that a generator located in a reserve zone moves to a different reserve zone the following quarter and to include any needed tariff revisions.

6. Automated Mitigation Procedures

a. Midwest ISO Proposal

168. The Midwest ISO proposes to apply mitigation procedures manually rather than automatically in the proposed ASM. The Midwest ISO states that an automated mitigation procedure (AMP) is inappropriate for the proposed ASM because an AMP would not provide market participants with the opportunity to: (1) give the IMM any reasonable justification for their offers, if such offers would trigger mitigation; and (2) prevent the inappropriate application of mitigation measures. The IMM also notes that attempts to mitigate market power with the proposed ASM should be limited by the substitutability of resources from the energy market through co-optimization.

b. Comments

169. Midwest TDUs, Midwest Transmission Customers, and Southwestern argue that the Midwest ISO should be required to implement an AMP at market start.

170. In response to the IMM's argument that an AMP would prevent it from consulting market participants to prevent an inappropriate application of mitigation, Southwestern asserts that the purpose of an AMP is to avoid undue discretion once the appropriate mitigation thresholds have been reached. Southwestern contends that, contrary to the Midwest ISO's assertion, current market monitoring and mitigation for the energy markets are insufficient for the ASM and do not obviate the need for an AMP because opportunity and scarcity cost-based prices for operating reserves are particularly vulnerable to manipulation. Southwestern adds that it is inappropriate to implement the ASM if the AMP process has not yet been fully developed because customers will not be fully protected from the exercise of market power. In addition, Southwestern notes that the Midwest ISO indicates that it is still working with its stakeholders to develop performance metrics for the ASM systems and management practices.

171. Midwest Transmission Customers request that the Midwest ISO clarify that it intends to fully implement automated mitigation of operating reserve offers. Midwest Transmission Customers contend that the Midwest ISO's proposal to implement an AMP for its day-ahead energy market renders moot the IMM's arguments favoring manual mitigation of the proposed ASM. Specifically, Midwest Transmission Customers argue that the Midwest ISO suggested that its request to implement the AMP for its day-ahead energy market was urgent because the Midwest ISO requested that the AMP become effective on the day following the filing of its proposal in that proceeding.

172. In addition, Midwest Transmission Customers request to incorporate, by reference, certain previous comments pertaining to whether the ASM should have an AMP.⁶⁴ Midwest Transmission Customers argue that accepting automated mitigation of the energy markets and permitting manual mitigation of the ASM would be inconsistent because it resolves a “gaping hole” in the energy market’s mitigation measures while permitting the same problem to occur in the ASM. Furthermore, Midwest Transmission Customers explain that the Commission ordered the Midwest ISO to implement an AMP for its energy markets, primarily to eliminate a one-day lag in the application of mitigation measures. Midwest Transmission Customers argue that the Midwest ISO repeatedly cited resource constraints to delay implementation of the required AMP in its energy markets, while instead diverting those resources to develop new projects, such as the proposed ASM.

173. Midwest TDUs argue that the proposed mitigation measures should be automated. Midwest TDUs express concern that, absent an AMP, there will be a day’s delay in the application of mitigation, at least in day-ahead markets. Midwest TDUs ask the Midwest ISO to clarify how timely mitigation will be accomplished in the ASM absent an AMP, including whether there will be a delay in applying mitigation. If there will be a delay in applying mitigation, Midwest TDUs request that the Commission require the Midwest ISO to implement an ASM prior to market start. Midwest TDUs contend that, absent timely mitigation with an AMP, the Commission should not authorize market-based rates. According to Midwest TDUs, the IMM has not supported its claim that manual mitigation would be effective. In addition, Midwest TDUs argue that the substitutability of energy and operating reserve offers during market co-optimization or the ability of LSEs to shift demand from the day-ahead to the real-time market does not overcome potential market power in the ASM or obviate the need for an AMP. Midwest TDUs note that the Midwest ISO delayed implementation of an AMP in the day-ahead energy market for years following the Commission’s original directive and request that the Commission require that an AMP be implemented before market start to prevent such delays.

c. Answers

174. The Midwest ISO states that it does not object to the eventual development of an AMP for the proposed ASM in the future, but that such a program is neither needed nor desirable at market start. The Midwest ISO explains that, given the uncertainty of calculating marginal costs to determine appropriate reference levels, manual mitigation

⁶⁴ Midwest Transmission Customers request to incorporate part of their prior protest submitted March 30, 2007, in Docket No. “ER05-770.” As no such protest exists in that proceeding, we believe Midwest Transmission Customers instead intended to refer to Docket No. ER07-550-000.

would allow the IMM to review the situation and consult with market participants, if necessary, prior to applying mitigation measures. The Midwest ISO states that an AMP could be developed and implemented if manual mitigation results in a substantial delay and reduces the efficacy of the mitigation measures.

175. The Midwest Transmission Customers argue that the Midwest ISO has not proposed to revise recently approved tariff language that suggests that an AMP would apply in both the energy and ancillary services markets. The Midwest Transmission Customers state that the Midwest ISO should not be permitted to circumvent the normal approval process for proposed tariff revisions by allowing such language to be proposed for the first time via a compliance filing.

d. Technical Conference Comments

176. Southwestern reiterates that it is inappropriate to implement the proposed ASM at this time because the Midwest ISO is still developing performance metrics and an AMP. Southwestern requests that the Commission require the Midwest ISO to implement an AMP and states that opportunity and scarcity prices are particularly vulnerable to manipulation in transmission constrained areas. Southwestern argues that an AMP is important to prevent the IMM from exercising discretion to not apply mitigation based on consultations with market participants. Southwestern adds that such consultations are unnecessary and will require the IMM to invest a significant amount of time and staff resources, adding to administrative costs and delays in mitigation.

e. Commission Determination

177. We find that manual mitigation will appropriately mitigate the exercise of market power, consistent with the manual mitigation measures previously applied in the Midwest ISO day-ahead energy market. The Midwest ISO day-ahead energy market started with manual mitigation and automatic mitigation was not applied for the first two years of day-ahead market operation. Over this time, the Commission did not receive complaints regarding manual mitigation, nor did the IMM report any patterns of behavior in which mitigation was repeatedly needed but could not be applied due to the time lag.

178. We recognize that an AMP may improve the performance of Midwest ISO's mitigation measures by shortening any time lag associated with manual mitigation, and we note that the Midwest ISO and IMM do not object to the eventual development of such a program. However, we are concerned that the immediate implementation of an AMP could require significant software changes and delay the start of the ASM. In addition, manual mitigation is important during the initial 90-day period following market start to allow the IMM to consult with market participants regarding the determination of their initial reference levels. For these reasons, we consider the most reasonable course to be a requirement that the Midwest ISO implement automated mitigation in the ASM as soon as possible in the 90 days following the start of the ASM.

We require the Midwest ISO to submit a plan to implement automated mitigation in a compliance filing to be submitted within 60 days of the date of this order. We also require the IMM to monitor market behavior and submit a report to the Commission in the event it determines that manual mitigation is not effectively inhibiting the exercise of market power.

7. Mitigation of Demand Response Resources

179. DRRs are divided into two categories: DRRs-I and DRRs-II. DRRs-I are resources hosted by an energy consumer or load serving entity that are capable of supplying a *specific quantity* of energy or contingency reserve, at the choice of the market participant, to the energy and operating reserve market through physical load interruption. DRRs-II are resources hosted by an energy consumer or load serving entity that are capable of supplying a *range* of energy and/or operating reserve, at the choice of the market participant, to the energy and operating reserve market through behind-the-meter generation and/or controllable load.

a. Midwest ISO Proposal

180. To reflect that DRRs-II may be modeled similarly to generation resources, the Midwest ISO proposes to allow certain DRRs-II to set market clearing prices. In addition, proposed sections 39.2.5A.d and 40.2.6.e of its tariff provide hourly offer caps of \$100 per MWh for DRRs-I providing contingency reserves in the real-time and day-ahead energy and operating reserve markets. These caps are identical to the contingency reserve offer caps in proposed sections 39.2.5.f and 40.2.5.h for generation resources and DRRs-II. However, while an energy offer price cap of \$1,000 per MWh is proposed for generation resources and DRRs-II, no comparable price cap is proposed for the hourly curtailment offers of DRRs-I.

b. Comments

181. Southwestern objects to the Midwest ISO's proposal to not apply its market monitoring and mitigation plan to DRRs that may set locational marginal prices and/or market clearing prices. Southwestern argues that this would create the potential for abuse.

182. Ameren expresses concern that DRRs-I are not subject to hourly curtailment and shut-down caps in proposed sections 39.2.5A and 40.2.6.e for both the day-ahead and real-time markets. Absent such offer caps, Ameren argues that DRRs-I may inflate their offers to receive excessive make-whole payments. Wisconsin Electric contends that DRRs' offers should be capped at a reasonable level.

c. Answers

183. The Midwest ISO argues that an offer cap should not apply to the hourly curtailment offer for DRRs-I. The Midwest ISO explains that DRR-I hourly curtailment offers include the equivalent of both energy and no-load offers because such resources can supply only a fixed amount of energy such that there is no need to separate these two components. Midwest ISO concludes that an offer cap should not apply to the hourly curtailment offer for DRRs-I because such caps do not apply to no-load offers for any other resources.

184. Ameren argues that the relative size of DRRs-I is not relevant because they are just as capable as energy resources of exercising market power or receiving excessive prices. Ameren contends that market participants should not have to wait for the exercise of market power to occur before offer caps are imposed and that offer caps are not intended to only address the exercise of market power. Ameren explains that offer caps are also designed to prevent offer prices from exceeding scarcity prices and to protect consumers when prices reach excessive levels due to tight supplies or other reasons. Ameren clarifies that it wants the Midwest ISO to adopt hourly offer price caps of \$100 per MWh for shut-down and hourly curtailment offers in the real-time and day-ahead energy and ancillary services markets.

185. In response to the Midwest ISO's contention that DRRs-I should not be subject to hourly curtailment offers because DRRs-I include the equivalent of both energy and no-load offers and price offer caps do not apply to no-load offers for any resources, Ameren asserts that DRRs-I should be treated as the equivalent of energy resources and be subject to similar caps. Ameren adds that, without such caps, DRR-I offer prices could exceed prices during shortages, which is not allowed by the current market rules.

186. Midwest Transmission Customers argue that DRRs should not be subject to offer caps because they are smaller in size and have greater ownership diversity than generation resources. Midwest Transmission Customers contend that such offer caps should only be considered in the future if it is demonstrated that a competitive market does not exist or that a particular DRR may be capable of exercising market power.

d. Technical Conference Comments

187. In regard to whether DRRs-II should be subject to mitigation measures, the Midwest ISO explains that it would be possible for a large supplier with a large amount of behind-the-meter generation to withhold in order to exercise market power. However, the Midwest ISO explains that applying mitigation measures to DRRs-II is unlikely to have a significant market impact because DRRs-II are likely to be small generators without a significant amount of behind-the-meter generation and an incentive to withhold. In addition, the Midwest ISO contends that it would be costly to maintain accurate reference levels for DRRs-II. The Midwest ISO explains that DRRs-II may not

have any offers during the previous 90 days to create a reference level because such resources do not qualify as designated network resources and are not subject to a must offer requirement.⁶⁵ In addition, the Midwest ISO argues that it may be particularly difficult to quantify the costs of certain cogeneration resources because their costs depend on factors other than the cost of generating electricity. The Midwest ISO concludes that there are a significant number of these resources, and that inappropriate reference levels and the ensuing inappropriate mitigation may act as a barrier to entry for new DRRs-II.

e. **Commission Determination**

188. Given that the market power analysis could not consider DRRs, it is difficult to determine the market power risks, if any, associated with such resources. We are persuaded by the IMM's explanation that those risks should not be substantial because DRRs-I cannot set market prices and DRRs-II are generally too small to have an incentive to withhold. However, we are concerned that it may still be possible for certain DRRs to exercise market power.

189. We understand that it would be difficult, if not impossible in some cases, to determine appropriate reference levels and apply mitigation using the conduct and impact approach for DRRs. Moreover, we recognize the importance of ensuring comparable treatment of DRRs in the Midwest ISO's markets, including the ability of such resources to help mitigate market power, and are concerned that mitigation, if inappropriately applied, could hinder their market participation. To alleviate our market power concerns, we will require the Midwest ISO to clarify that the IMM will: (1) monitor DRRs in a manner comparable to generation resources; (2) notify the Commission of any behavior by a DRR that the IMM has reason to believe has violated applicable market rules, according to section 53.3 of the Midwest ISO tariff;⁶⁶ (3) assess and report on uplift charges associated with the make-whole payments given to these demand resources; and (4) assess and report on the market effects of DRRs in the Midwest ISO's markets, including any market benefits and perceived market power risks, as part of its annual State of the Market Report. We direct the Midwest ISO to include any appropriate tariff revisions to explicitly reflect these clarifications in a compliance filing to be submitted within 30 days of the date of this order.

⁶⁵ Joint Technical Conference Comments of the Midwest ISO and IMM at 17.

⁶⁶ Section 53.3 provides that the IMM will make a referral to the Commission of behavior that has violated the Midwest ISO's tariff, other Commission-approved market rules of the Midwest ISO, or any applicable Commission market rule.

190. With regard to Ameren's concern that, without adequate offer caps, prices could exceed scarcity levels, the Midwest ISO should also state in its compliance filing if and under what conditions offers from demand resources would be allowed to set prices above scarcity levels. In addition, the Midwest ISO has not demonstrated why DRRs-I should be excluded from the \$1,000 per MWh energy offer cap. We understand that DRRs-I hourly curtailment offers include the equivalent of both no-load and energy offers for generation resources and DRRs-II and that such no-load offers are not capped. However, we will require the Midwest ISO, in its compliance filing, to extend the \$1,000 per MWh offer cap to the hourly curtailment offers of DRRs-I in a manner comparable to other resources, in order to prevent them from exercising market power to extract excessive make-whole payments. In addition, we will require the Midwest ISO to explain, in its compliance filing, whether the hourly curtailment offers of DRRs-I can be split into their component energy and no-load equivalents in order to apply the offer cap to only the energy offer portion.

E. Scarcity Demand Curves

1. Midwest ISO Proposal

191. The Midwest ISO proposes to adopt scarcity pricing in its day-ahead and real-time markets using a demand curve for operating reserves (and co-optimization between the energy and ancillary services prices). The Midwest ISO explains that scarcity pricing will be invoked based on the clearing prices established by the demand curves when sufficient capacity is not available to meet the operating reserve requirements during the hour or dispatch interval. The Midwest ISO proposes a minimum operating reserve scarcity price of \$1,100/MWh, which is based on the sum of the energy and the contingency reserve offer caps. The Midwest ISO proposes a maximum operating reserve scarcity price of \$2,500/MWh based on a value of lost load (VOLL) calculation of \$3,500/MWh⁶⁷ and the minimum regulating reserve scarcity price of \$1,000/MWh.

192. In response to concerns raised in the Commission's Guidance Order, namely that shortage conditions could lead to increased exercise of market power by resources seeking to trigger scarcity pricing through withholding, the Midwest ISO incorporates

⁶⁷ The testimony of Mr. Roy Jones included in the Midwest ISO filing describes the method by which the proposed demand curves and the \$3,500/MWh VOLL were calculated and the interaction between the various demand curves and the market clearing prices. While the Midwest ISO determined that the \$3,500/MWh VOLL is a reasonable scarcity price based on currently available data, it also committed to working with its stakeholders to develop a detailed methodology to calculate and establish the appropriate periodicity for updating the VOLL calculation prior to the end of the first full year of the energy and operating reserves market's operations.

into its proposal provisions to ensure that resources are regularly audited for physical withholding and that the IMM timely reports such withholdings. Also, the Midwest ISO states that it and the IMM will continue to assess the expected response of resources to the proposed demand curves and the market data and metrics appropriate to include in existing and/or new reports. The Midwest ISO states that it expects such information to be included in the IMM's Annual State of the Market Reports and its Monthly Reports to the Midwest ISO Board of Directors Markets Committee, as well as the Midwest ISO's Daily and Monthly Market Operations Reports and a new Real-Time Market Clearing Price Contour Map.

193. The Midwest ISO justifies inclusion of these scarcity prices, noting that the Guidance Order generally supported the Midwest ISO's demand curves and indicated that the scarcity pricing will provide a significant incentive for short-term reliability and for integrating DRRs during shortages. Regarding some market participants' concern that they could be exposed to higher prices due to the application of the scarcity prices, the Midwest ISO notes that such concerns need to be assessed in the context of the impact of all aspects of the ASM proposal and that it is expected that the introduction of a regional ASM and the efficient selection of offers for these services through simultaneous co-optimization will benefit load by reducing the cost of reserves. Similarly, the Midwest ISO argues that suppliers will better use their resources because they will be able to base their commitment decisions on the market value of energy and operating reserves. The Midwest ISO further explains that the process of managing shortages ensures that they first attempt to obtain lower cost reserves or reduce demand before the highest scarcity prices are triggered.

2. Comments

a. Reasonableness of the VOLL

194. The OMS argues that one of the key elements of ASM design is scarcity pricing implemented through the use of demand curves and the proposed demand curves are central to providing the proper incentives. The OMS does not disagree with how the curves are utilized in the market clearing process. Several entities, however, including the OMS, question the derivation of the demand curves and the values used in setting the curves and the Midwest ISO's scarcity pricing.

195. The OMS, Southwestern and Indianapolis P&L argue that the curves must be properly derived such that the resulting prices provide the proper short-term and long-term financial incentives. The OMS contends that when priced properly, the Midwest ISO's energy and ancillary services markets, when added to other revenues, should provide prices that are high enough to allow for the recovery of needed and prudent investment costs but are not so high as to be unjust and unreasonable. The OMS argues that the Midwest ISO has not yet shown how the demand curves and their respective

pricing points provide those incentives. The OMS urges the Commission to direct the Midwest ISO to continue work with stakeholders on all of the inputs to the demand curve by also considering changes in offer caps, the VOLL, and any other changes towards revising the demand curves to provide the proper financial incentives.

196. Indianapolis P&L argues that it has not been demonstrated that scarcity pricing will succeed in achieving demand response. It states that most customers are unable to respond to real-time prices because of insufficient information, inflexible rate design, and metering limitations. It contends that most resources take years to develop, spot prices alone may not signal the need to begin development of new resources to avert a shortage, and the vast majority of load does not have the capability to identify and respond to real-time prices. Indianapolis P&L argues that while it has ten existing rates and riders whose participants can be considered as demand assets, only one of the contracts is conducive to participation in the ASM.

197. Indianapolis P&L argues that while non-rate factors or incentives have been approved by the Commission and courts, they generally have taken the form of incentives to the entity undertaking the activities such as rate of return adders for entities engaged in certain types of transmission construction activities. In the case of scarcity pricing, it argues that the Commission is imposing administratively-determined costs on entities that may or may not have contributed to the shortage.

198. Indianapolis P&L notes that the Commission has previously found that a scarcity level of \$1,000/MWh meets the same objectives that have been expressed for the \$3,500/MWh price. It argues that if a scarcity price of \$1,000/MWh in New England can promote the goals of increased additional external supply, reduction in internal demand, and development of new capacity, there is no reason to believe the same would not be true for the Midwest. Indianapolis P&L further argues that California does not have a capacity market, only a resource adequacy requirement, and it has proposed a scarcity price of \$1,000/MWh for the start-up of its new market design.

199. Indianapolis P&L argues that the legal standard is clear that the Commission “must see to it that the [incentive] is in fact needed, and is no more than is needed, for the purpose.”⁶⁸ It argues that the Commission must consider alternatives, including the necessary size of any incentive, and the Midwest ISO has the burden of proof to support

⁶⁸ *Pub. Util. Comm’n of Cal. v. FERC*, 367 F.3d 925, 929 (D.C. Cir. 2004) (quoting *Farmers Union Cent. Exch. v. FERC*, 734 F.2d 1486, 1503 (D.C. Cir. 1984)) (requiring the Commission to calibrate the relationship between the increased rates and the attraction of new capital).

its proposed scarcity price level. It explains that the record is completely devoid of any analysis of the level of additional supply that would be attracted by the scarcity prices and whether or not a lower scarcity price would achieve a similar result.

200. Indianapolis P&L contends that the Commission should make clear that the costs associated with scarcity prices must be allocated to the load serving entities responsible for the scarcity condition, consistent with cost-causation principles, rather than socialized across the expansive Midwest ISO footprint or even allocated to other entities within the same zone. It argues that in its Order on the California Comprehensive Market Design Proposal, the Commission stated that customers “who are resource adequate are generally immune from scarcity-related high prices caused by demand from customers who did not procure adequate resources.”⁶⁹ It also notes that the Commission recognized that if the costs of scarcity are in part subsidized by entities that are meeting their own obligation, this would be an improper incentive to underinvestment as the parties causing the shortage conditions would have the incentive to depend on the resource development investments of others. Southwestern adds that any demand curve and ASM proposal should include opt-out provisions as was done in PJM.

201. Midwest TDUs argue that prior to Midwest ISO’s modifying the tariff to revise VOLL, the Commission should require the detailed methodology that results from the promised stakeholder process to be filed as tariff language subject to the Commission’s approval. Midwest TDUs contend the methodology should determine ASM prices in a manner not unlike other formulae set forth in the TEMT, such as the one to determine the conduct and market impact thresholds used to assess offers in Narrow Constrained Areas. Midwest TDUs also contend that the Commission should reassure stakeholders now that if and when the Midwest ISO files (or in any way proposes to institute) a revised VOLL value, the Commission will carefully review whether the ASM rules being established now will remain just and reasonable in light of that revised VOLL.

b. Clarity

202. Several entities argue that the Midwest ISO is not sufficiently clear as to when scarcity pricing will be invoked. Constellation contends that the Midwest ISO resubmission still lacks sufficient clarification and specificity with respect to the linkage between system conditions, operator actions and the establishment of clearing prices. Constellation argues that it is essential that the tariff describe with precision how prices will be determined when scarcity conditions exist, in order to ensure that market participants can appropriately manage both their physical and financial risks. Xcel further states that the Midwest ISO removed a significant amount of detail regarding the

⁶⁹ *Cal. Indep. Sys. Operator Corp.*, 105 FERC ¶ 61,140 at P 214 (2003).

steps that it will take during capacity shortage emergencies. Xcel argues that at a minimum, the Midwest ISO should explain how scarcity pricing will be invoked once step two of the emergency procedure is implemented. Ameren explains that the Midwest ISO states that scarcity pricing will be included in locational marginal prices and market clearing prices if and only if a shortage of Operating Reserve “persists,” which leaves a high level of uncertainty regarding the Midwest ISO’s decision process on whether or not scarcity pricing is appropriate and will cause corresponding uncertainty.

203. Ameren explains that in the Docket No. ER07-550 ASM Filing, the Midwest ISO included a description of how specific Energy Emergency Alerts (EEA) level declarations would be coordinated with the Midwest ISO’s energy and ancillary services market activities. It contends that in the ASM Filing submitted in Docket No. ER07-1372, the references to specific EEA levels in the above section have been removed except for general comments. It contends that the Midwest ISO should be required to include a complete discussion of how EEA level declarations will be coordinated with energy and ancillary services market activities.

204. Constellation states that such clarity is most needed in section 40.2.22, to identify the conditions precedent for the Midwest ISO to make emergency purchases from surrounding areas, including pricing considerations. It contends that there are currently no standards governing when the Midwest ISO may reach outside the Midwest ISO footprint to procure emergency supplies. It argues that the tariff should establish criteria under which the Midwest ISO may look to other areas for supply, such as limiting purchases of power outside the Midwest ISO footprint to situations in which the Midwest ISO’s supply prices equal or exceed the prices in the area in which the Midwest ISO is seeking to procure power. Constellation contends that limiting out-of-footprint procurements to those situations in which the Midwest ISO’s prices are equal to or higher than the neighboring areas ensures that operators are taking action only when such action is needed.

c. Pricing During Scarcity Conditions

205. Several entities, including Xcel, DC Energy, Reliant & Dynegy, and Constellation, argue that the implementation of emergency procedures in periods where scarcity pricing is not triggered would send incorrect price signals. Reliant & Dynegy contend that the Midwest ISO’s proposed approach to applying scarcity pricing after an emergency condition is inadequate to accomplish resource adequacy and undermines the development of price-responsive demand. Reliant & Dynegy contend that the Midwest ISO would frequently be in an emergency situation and would not see pricing levels that reflect true emergency conditions. Xcel argues that actions such as issuing public appeals to reduce demand and curtailing interruptible load that is not bid into the market will have the effect of reducing prices and sending incorrect price signals during emergencies. DC Energy argues that the Midwest ISO’s actions during such situations would mute the

effect of scarcity pricing and the resulting critical long-run economic indicators on which the marketplace relies to make new investments in either transmission or generation and which provide incentives for existing units to continue operations and demand-response resources. Xcel argues that the Midwest ISO should be required to develop a proposal for maintaining scarcity pricing while in step two of the emergency procedure. DC Energy also argues that the Midwest ISO's procedures preclude the potentially critical development of price sensitive demand response, limiting its demand response options to centralized load curtailment programs.

206. Constellation contends that the costs of any procurement from DRRs or purchases outside the RTO should be immediately calculated and reflected in the real-time prices for the Midwest ISO deficient region. It states that the Midwest ISO's tariff as currently written places no guidelines under which the Midwest ISO may seek supply outside the Midwest ISO footprint, and allocates the cost of such supply on a pro rata basis to those market participants in the deficient region that deviate from their day-ahead schedules. It argues that as such the Midwest ISO sends the wrong signals. Constellation argues that the Midwest ISO's out-of-footprint procurements are not factored into the locational marginal price at all which in turn could lead to the locational marginal price in the neighboring area increasing and could encourage marketers to send supply to that area in order to obtain the highest price. Constellation concludes that the Midwest ISO's operators should be permitted to reach outside the footprint to procure supply only when prices are higher than in adjacent areas. Constellation further argues that the price of any out-of-footprint purchases should be run through the Midwest ISO's pricing model and reflected in the real-time locational marginal price for the affected area, rather than being allocated pro-rata at some later point in time.

207. DC Energy argues that the Midwest ISO's proposal relies on commitments within the emergency ranges of generating units, and that this is tantamount to dipping into operating reserves. It argues, however, that as the Midwest ISO increases supply through the use of emergency units, it is reducing load and thus prices will fall in times of relative scarcity. DC Energy contends that defaulting to a reliability tool prior to using a market solution results in a short-circuiting of the pricing signals that would otherwise direct participants to provide additional supplies of energy and reserves and/or reduce consumption. DC Energy also argues that a capacity shortage identified during the Reliability Assessment Commitment (RAC) process will result in the commitment of the emergency ranges of units, curtailment of non-firm exports as well as physical load interruptions without corresponding pricing signals indicating this scarcity.

208. DC Energy suggests modifications to the EMT to correct the current approach, which involves defaulting to pre-market reliability tools during emergency conditions. It proposes a revised step one where the Midwest ISO would implement scarcity pricing in the event energy and operating reserve requirements cannot meet demand in the day-ahead energy and operating reserves market. DC Energy proposes that if energy and

operating reserves do not balance with demand after this revised first step, then the Midwest ISO would price all energy and operating reserves at the VOLL. DC Energy contends that by revising the sequence of the Midwest ISO's actions during a possible day-ahead shortage, the Midwest ISO gives market participants ample opportunity to prepare to provide additional supplies of energy and/or voluntarily reduce consumption between the close of the day-ahead market and the approach of the operating hour.

209. In its protest, DC Energy also recommends that the Midwest ISO revise the process for handling real-time capacity shortages. It proposes that when a capacity shortage is identified in the RAC process, the Midwest ISO should declare the appropriate level Energy Emergency Alert. As the revised first step during an EEA Level 1, the Midwest ISO should implement scarcity pricing. If this action is insufficient to relieve the anticipated capacity shortage, then as the revised second step during an EEA Level 1, the Midwest ISO should issue a public appeal to reduce consumption and the urgency associated with this public appeal is escalated. As the revised third step during an EEA Level 1, the Midwest ISO should commit the emergency ranges of units, curtail non-firm exports as well as commit physical load interruptions, behind-the-meter generation, and/or Controllable Load. Should these actions prove insufficient to resolve the impending capacity shortage, the Midwest ISO should then declare an EEA Level 2, initiate Emergency Energy purchases, issue public appeals indicating the potential for capacity shortages has reached a critical point, and direct that all interruptible load be curtailed. Only during an EEA Level 3 should the Midwest ISO direct that firm load be shed.

d. Scarcity and Withholding

210. Midwest TDUs argue that in order to protect against physical withholding during the first year of ASM operation, auditing and reporting should occur monthly and, in the following years, assuming that physical withholding is not a problem, auditing frequency might be reduced to quarterly. They argue that the Commission must also address physical withholding concerns by requiring the Midwest ISO to analyze the effect of the proposed sunset of the must offer requirement for the regulation market.

3. Answers

211. The Midwest ISO agrees with protesters that the language in section 40.2.20 of Midwest ISO's tariff should specifically reference EEA levels for each of the steps outlined. The Midwest ISO states that the tariff language can be modified to clarify that: (1) section 40.2.20.a.i outlines the steps taken in the RAC process prior to and/or concurrent with the declaration of an EEA Level 1; (2) section 40.2.20.a.ii outlines the steps taken in the RAC process when an EEA Level 2 or higher is declared; (3) section 40.2.20.b.i outlines the steps taken in the Real-Time Market when an EEA Level 1 or higher is declared; and (4) section 40.2.20.b.ii outlines the steps taken in the Real-Time

Market when an EEA Level 3 is declared. The Midwest ISO commits to making tariff changes in the sections referenced above to reflect the Midwest ISO's proposed linkage between scarcity pricing and emergency operations as described below if directed by the Commission in a compliance filing. With regard to the linkage between scarcity pricing and emergency operations during a shortage condition, the Midwest ISO clarifies that the proposed tariff lays out the steps and pricing implications during emergencies.

4. Commission Determination

212. In the Guidance Order, the Commission found that the demand curves for operating reserves, with corresponding scarcity prices, proposed in the Midwest ISO's filing should provide a significant incentive for short-term reliability, for the triggering of demand response during shortages, and for load to contract forward at prices lower than the scarcity prices. This would reflect the value of reserves and energy during these conditions. The Midwest ISO's proposed scarcity pricing mechanism, along with the Midwest ISO's clarifications made on reply, present a similar scarcity pricing mechanism to that previously filed, with increased monitoring for physical withholding. Such a scarcity pricing mechanism using a demand curve for operating reserves presents a reasonable addition to the current Midwest ISO market design.

213. In the Competition NOPR, being issued concurrently with this order, we find that existing market rules in RTOs and ISOs appear to be unjust, unreasonable and unduly discriminatory or preferential during times of scarcity because prices in these markets may not accurately reflect the true value of energy. The lack of a proper price signal may in turn harm reliability, inhibit demand response, deter new entry, and thwart innovation. To remedy this problem, the Commission proposes in the Competition NOPR to require each RTO and ISO to make a compliance filing proposing any necessary reforms to ensure that the market price for energy accurately reflects the value of such energy during periods of scarcity, and proposes that a region may either adopt one of the methods identified in the NOPR or propose an alternative method. Under the proposal set forth in the Competition NOPR, that compliance filing must be accompanied by an adequate factual record and adequate mitigation measures during periods of operating reserve shortage. One of the four methods identified in the NOPR for allowing the market price to better reflect the VOLL in an emergency situation is to adopt a demand curve for operating reserves such that when available generating capacity falls short of combined energy demand and operating reserve requirements, the market price for energy and operating reserves would increase to specified levels, typically above the market-wide seller offer cap.

214. While the proposed rule set forth in the Competition NOPR is subject to comment and has not taken effect, we note that the Midwest ISO's proposed use of demand curves and scarcity pricing is consistent with that scarcity pricing method, and that the Midwest ISO has developed measures to monitor and mitigate market power that could artificially

drive prices to scarcity levels. The conduct and impact tests to be used in the ASM during periods of scarcity have procedures to mitigate physical withholding and the Midwest ISO has incorporated into its proposal additional provisions to ensure that resources are regularly audited for physical withholding and that the IMM reports these instances. As such, we will accept the Midwest ISO's proposed use of demand curves and scarcity pricing.

215. Several entities express concern that the values used in setting these demand curves (in particular the \$3,500/MWh VOLL) are inappropriate and/or unsupported. We conclude that, between the information provided by the Midwest ISO in estimating the VOLL and the testimony of Mr. Roy Jones explaining how the values are used to set prices through the demand curves in the different reserve curtailments, the Midwest ISO has adequately supported the demand curve levels. We recognize that estimating the VOLL, associated with involuntary load curtailments, is not an exact science. The Midwest ISO's data and assumptions, however, are reasonable. The Midwest ISO uses statistical data from eight different LSEs over a 14-year period providing a fairly large sample and outage costs with different durations and frequencies. This is a reasonable proxy to calculate the VOLL. As explained by Mr. Jones, the demand curves allow the market prices to reflect the reliability value of capacity and regulation capability to the market at various deficiency levels on both a market wide and zonal basis. When the market for energy or one of the ancillary services products is deficient, the pricing rules reflect the reliability value of this deficiency in the market price for both the deficient product and the other products.

216. However, we agree with the OMS and Midwest TDUs that the values used should continue to be supported since the VOLL and associated demand curves require revision. We direct the Midwest ISO to continue working with stakeholders on both the inputs to the demand curve and other market design changes in the future in order to provide the proper financial incentives for short-run reliability and long-term resource adequacy as the Midwest ISO, on reply, has agreed to do. Further, as the Midwest TDUs request, we require that when the Midwest ISO modifies the tariff to revise the VOLL, it should provide the methodology that emerges from the promised stakeholder processes. We do not require the methodology used to revise the VOLL to be like other formulae set forth in the TEMT, but we note that the Commission will continue to review whether the values used in the demand curve remain just and reasonable.

217. With regard to Indianapolis P&L's concern that the costs associated with scarcity prices must be allocated to the load serving entities responsible for the scarcity condition rather than socialized across the footprint or even allocated to other entities within the same zone, we are sympathetic to the desire of Indianapolis P&L that the costs borne by market participants reflect cost causation. As discussed in the cost allocation section below, we are requiring the cost allocation for ancillary services to more closely reflect cost causation. Under the Midwest ISO scarcity pricing provisions, during reserve

shortage periods prices will reflect scarcity, and therefore market participants will see better price signals for making longer-term decisions. Loads will pay the costs of scarcity in their zone regardless of whether they were the cause of the scarcity. Generally, these loads should be able to hedge most of these higher costs through contracts. However, we recognize that obtaining a perfect hedge of these scarcity costs could be difficult given the dynamic determination of reserve zones. We note that, as a practical matter, determining precise cost causation is difficult, especially in scarcity situations. Many factors can cause scarcity conditions (i.e., transmission outages), and scarcity situations are not necessarily caused by market participants with insufficient reserves. Given this imprecision and the need for the Midwest ISO to obtain reserves to reliably serve all customers, we find it reasonable to assign scarcity costs to the load zone that benefits from the reserves. While ideally the load that may be the cause of the scarcity should see the full scarcity price and thereby see the prices they caused to be incurred, we do not believe that the lack of a price signal makes the cost allocation unjust and unreasonable, for the reasons discussed. We encourage the Midwest ISO to discuss this issue further with stakeholders.

218. In response to those that argue that the Midwest ISO proposal does not adequately explain the relationship between scarcity situations, operator actions, and the corresponding market prices, we note that the Midwest ISO on reply provided a description of these relationships and committed to making the appropriate tariff changes to reflect the Midwest ISO's proposed linkage between scarcity pricing and emergency operations if so directed by the Commission. As such, we will require the Midwest ISO to include this linkage in a compliance filing to be submitted within 30 days of the date of this order.

219. We disagree with market participants' concern that the Midwest ISO's use of capacity from DRRs or actions during emergency conditions, such as issuing public appeals to reduce demand, curtailing interruptible loads, or acquisition of higher priced energy from outside of the footprint without automatically triggering scarcity pricing, could send inappropriate price signals. Load resources contracted to provide for reductions under a utility's demand response program often do not have a corresponding cost associated with supplying the reduction in that hour and, as such, when these resources are called upon, the market clearing price could decrease. While we recognize that this can be an issue for long-term resource adequacy, in terms of this order our primary concern is whether such actions, combined with the corresponding prices, create appropriate incentives for resources to make themselves available to the market in order to meet short-term reliability needs. We expect that the emergency procedures and corresponding short-term price signals will reasonably encourage resources to participate in the market. Also, as the Commission stated in the Guidance Order, the Midwest ISO proposal would allow prices to increase up to \$1,100/MWh in the early stages of a

shortage, a level that we expect will create effective incentives for resources to enter the market.⁷⁰ However, we share Constellation and DC Energy's concerns that if the Midwest ISO consistently purchases energy in real-time from outside the footprint at prices higher than are being signaled inside the Midwest ISO, this could lead to prices that do not properly reflect the incremental value of energy during a given hour. As such, we require the IMM to examine whether actions taken by the Midwest ISO, such as procuring energy from outside the footprint or using the emergency portions of resources, are having an impact on the market signals for reserves, and to report to the Commission six months after the start of the ASM whether these actions are distorting the proper price signals.

220. We agree with the Midwest TDUs' argument concerning protection against physical withholding and will require the Midwest ISO to monitor and report on physical withholding on a monthly basis for the first year of ASM operation. In these monthly reports, the Midwest ISO should specifically address issues of physical withholding during periods when scarcity prices are triggered.

F. Reserve Zones

1. Midwest ISO Proposal

221. The Midwest ISO states that its goal in creating the reserve zones is to allow the reliable dispersion of operating reserves throughout the Midwest ISO Balancing Authority Area. To ensure that reserves can be reliably delivered, the Midwest ISO has proposed to conduct reserve zone studies. In the February 15, 2007 filing, the Midwest ISO proposed to define reserve zones through studies two days prior to the Operating Day. However, after further discussions with stakeholders, the Midwest ISO has revised its proposal to evaluate the configuration of reserve zones on a quarterly basis, which coincides with the Network Model update. The Midwest ISO states that this change will provide stability and certainty to market participants so that they can more effectively hedge their operating reserve costs and refine their offer strategies.

222. However, under the proposal, the Midwest ISO will have the ability to reconfigure the reserve zones more frequently than quarterly, if system reliability conditions warrant it due to events such as unplanned transmission outages or generator forced outages. Any such reconfigurations will last as long as the system event or until the next quarterly update, whichever is less. Although the configuration of the reserve zones will be defined quarterly, the minimum operating reserve requirements within each zone will be

⁷⁰ See Guidance Order, 119 FERC ¶ 61,311 at P 64.

calculated on a daily basis and communicated to market participants at least 48 hours prior to the Operating Day. In general, the Midwest ISO will use the same reserve zone definitions and attributes in both the day-ahead and real-time markets.

223. To define the reserve zones, confirm their ongoing necessity, and establish the operating reserves needed within each zone, the Midwest ISO proposes to conduct two studies: a reserve zone configuration study and a reserve zone requirements study. The reserve zone configuration study establishes the reserve zones and assigns resources, load, and/or elemental pricing nodes to specific zones. The reserve zone configuration study uses the network model for the target study period to identify all transmission constraints, screen those constraints for significance, and then group resources, load, and/or elemental pricing nodes around constraints based on impact. The reserve zone requirements study establishes the minimum amount of reserves needed within a zone by simulating the loss of each resource in the reserve zone and then importing from the resources with the highest impact on the transmission constraints until a limit is reached or the resource is replaced. The operating reserve requirement is the largest difference between MWs lost and resulting import capability, subject to certain minimums.

224. The Midwest ISO has proposed a minimum regulating reserve requirement for a zone of 10 MW. If the calculation of the minimum regulating reserve requirement results in a number less than 10 MW, the requirement for that reserve zone is set to 0 MW. The Midwest ISO also proposes, due to the large physical size of the market primarily, that 25 percent of the market-wide regulating reserve requirement will disperse through the zones and the remaining 75 percent will disperse throughout the market. Contingency reserve is the operating reserve requirement minus the regulating reserve requirement, but not less than 0 MW. Spinning reserves are subject to minimums similar to regulating reserves, in that a zonal requirement less than 10 MW will set the requirement to 0 MW.

225. The Midwest ISO states that it conducted tests to develop the reserve zone methodology and using a historical operating day, those tests resulted in four operating reserve zones including approximately 60 percent of the expected generation resources.⁷¹ The Midwest ISO also states that a single resource or load cannot be assigned to multiple reserve zones.⁷² All resources and loads will be assigned to a reserve zone, but where those resources and loads are not constrained by deliverability and would not otherwise need a reserve zone, they will be put into a separate reserve zone with a zero MW contingency reserve requirement and a non-zero regulating reserve requirement.

⁷¹ Midwest ISO Proposal, Att. E, Roy Jones Test. at 80.

⁷² *Id.* at 83.

2. Comments

226. NIPSCO asserts that it appreciates the Midwest ISO's effort to answer stakeholder concerns with regard to reserve zone concerns. It argues that quarterly establishment of reserve zones will provide stakeholders an opportunity to hedge against uncertainty.

227. Duke also states that the Midwest ISO's proposal regarding reserve zones is much improved over the prior version and that it appreciates the effort by the Midwest ISO to improve and clarify the process by which it will define reserve zones. However, Duke believes that further clarifications and improvements are needed.

228. Duke expresses concern that the methodology used to create reserve zones could result in an unreasonably high number of small reserve zones. It states that it is not clear whether the intent behind assigning interface elemental pricing nodes to specific zones is just for settlement purposes. Duke requests that the Commission direct the Midwest ISO to include a minimum reserve zone size, provide more details about the methodology, and provide indicative studies for the elemental pricing nodes allocated to the zones prior to the actual studies for market start.

229. Ameren is concerned that the 10 MW regulating reserve requirement for a reserve zone could result in very small zones, and many small zones could reduce the ability to hedge and therefore raise the costs to other, unconstrained zones. Ameren asserts that there should be a minimum MW level for the total zone load of approximately 1000 MW. It supports the Midwest ISO's intent to limit the amount of regulating or contingency reserve carried on a resource to no more than 20 percent of the system-wide requirement for reliability reasons; however, Ameren states that it cannot find where the tariff specifies this requirement. Ameren does not support the 48-hour minimum notice provision before reserve zone adjustments can occur as proposed by the Midwest ISO. Ameren maintains that this provision unreasonably restricts the Midwest ISO's ability to respond to changing system conditions and requests that the Commission direct the Midwest ISO to revise it.

230. Xcel requests clarification in section 39.2.1A.d(iii) which defines the process whereby reserve zone boundaries are set. Xcel interprets this section as making it possible that only a portion of the elemental pricing nodes making up a market participant's load zone will be included in a reserve zone. Therefore, it states that the Commission should require the Midwest ISO to provide to market participants the ratio of the load served at elemental pricing nodes in the reserve zone to its total load in the corresponding load zone so that market participants are able to calculate their portion of the locally allocated and exchange operating reserves costs.

231. Wisconsin Electric believes that to prevent market gaming and preserve system reliability there must be a way for the Midwest ISO to change reserve zones more frequently than quarterly. It asserts that reserve zones should be defined, at most, two

days prior to the operating day. Wisconsin Electric also submits that regulating reserves should not be allocated to reserve zones. According to Wisconsin Electric, the purpose of regulating reserves is to counteract deviations in Area Control Error (ACE), and that the contributors to these deviations are not locational, but instead represent the sum of many small changes occurring throughout the footprint. Therefore, it concludes that no reliability benefit is gained by limiting the amount of regulating reserve carried in a particular region, and it recommends that there be a general requirement that no resource be allowed to supply more than 20 percent of regulating reserves.

232. Southwestern comments that any locational requirement for capacity, operating reserves, and ancillary services, including reserve zones, is contrary to the concept of regional markets. Southwestern asserts that any reliability concerns for constrained regions that cannot build generation are best addressed by reducing or eliminating transmission constraints.

233. Midwest Transmission Customers assert that the proposal to define the reserve zones quarterly will result in unjust and unreasonable results. They argue that the Midwest ISO's proposal to define reserve zones quarterly and set obligations daily is not required, and it represents the subjective judgment of the Midwest ISO. Moreover, they note that PJM has maintained static reserve zones for years without compromising reliability. Also, Midwest Transmission Customers do not believe that a seven-day notice before the next reserve zone update, coincident with the network model update, is sufficient time for market participants to plan for changes in their portfolios. Midwest Transmission Customers therefore recommend that the Midwest ISO use a one-month notice period.

234. Midwest Transmission Customers also assert that the proposal to update the reserve zone obligations on a daily basis is unreasonable and unsupported and that the Midwest ISO has not demonstrated that it will lower costs of ancillary services for customers. Midwest Transmission Customers argue that changing reserve zone obligations daily will result in many problems, such as, impairing hedging opportunities, obstructing long-term contracting, undermining price certainty and precluding a proper market power analysis. Therefore, Midwest Transmission Customers urge the Commission to reject the Midwest ISO's proposal or in the alternative to direct the Midwest ISO to use reserve zones with a minimum term of one year.

3. Answers

235. The Midwest ISO states that it understands commenters' concerns about the number and size of reserve zones.⁷³ However, the Midwest ISO states that if the

⁷³ Midwest ISO Answer at 45.

minimum reserve zone size is too large, it will make it difficult to dispatch resources to manage reserve deliverability issues. Also, any minimum reserve zone size would be arbitrarily defined at this time because the results of the reserve zone study did not support the need for a minimum reserve zone size. The Midwest ISO commits to continue to study the need for minimum reserve zone size and to work with stakeholders on this issue. In addition, the Midwest ISO disagrees with commenters that the tariff does not contain enough details on how reserve zones are created. The Midwest ISO notes that in response to the Guidance Order, it provided additional details on reserve zones in sections 39.2.1.A.d through 39.2.1.A.f of its tariff. According to the Midwest ISO, additional details on the reserve zone mechanics will be provided in its Business Practice Manuals. In regard to Duke's specific request for clarification regarding the assignment of elemental pricing nodes to reserve zones, the Midwest ISO clarifies that this assignment is required to properly assign load within each zone, both on a market participant and total reserve zone basis, to aid in the settlement of operating reserve costs.

236. The Midwest ISO responds to commenters requesting that reserve zones be defined on a different schedule than quarterly by stating that there are clear advantages to updating reserve zones on a more frequent basis, as system conditions change every day. However, as a result of the stakeholder process following the Guidance Order, the Midwest ISO offered to reconfigure the reserve zones quarterly, but establish reserve requirements daily to provide the benefits of updating reserve zones frequently and offer the ability to hedge against uncertainty. The market sub-committee voted to adopt this provision accordingly.

237. Finally, the Midwest ISO disagrees that regulating reserves should not be allocated to reserve zones and that the dispersion of regulating reserves can be accomplished by limiting any resource to supplying no more than 20 percent of regulating reserves.⁷⁴ The Midwest ISO states that the large size of its footprint could result in operating issues if all regulating reserves were cleared in a localized area. As an example of negative consequences the Midwest ISO states that undesirable rotor angle oscillations could develop if all regulating reserves were cleared in a localized area. The Midwest ISO maintains that its proposal to disperse 25 percent of the market-wide regulating reserve requirement through the reserve zones while allowing the remaining 75 percent to clear anywhere within the market footprint is needed for reliability.

238. Ameren responds that if the Commission does not direct the Midwest ISO to institute a minimum reserve zone size of 1000 MW, then the Midwest ISO should be

⁷⁴ *Id.* at 48.

directed to complete its work with stakeholders on a minimum reserve zone size and submit a filing within 180 days of the commencement of market operations to establish a minimum reserve zone size.

4. Commission Determination

239. We accept the Midwest ISO's proposal to create reserve zones and allocate reserve requirements to those zones, subject to the modifications discussed below. There could be an acceptable range in the number and size of the reserve zones and the frequency of their reconfiguration⁷⁵ and still produce just and reasonable outcomes. The Midwest ISO has proposed a detailed reserve zone construct, which has been informed by stakeholder input⁷⁶ and thoroughly studied over the past year. It is clear from its answer that the Midwest ISO sees some benefit to more frequent updates to the reserve zones⁷⁷ and that this view is shared by some stakeholders.⁷⁸ Conversely, some stakeholders would prefer less frequent reserve zone updates.⁷⁹ We recognize that there is not likely to be unanimity on this issue. It is acceptable for the Midwest ISO to use its independent judgment to propose a paradigm that balances trade-offs between the ability to frequently reconfigure zones to reflect system constraints and the greater financial certainty provided by static reserve zones. We conclude that the quarterly configuration proposal and the daily requirements studies will not result in unjust or unreasonable results, nor will it disadvantage any market participant's ability to understand, plan for, or hedge their reserve zone obligations.

240. We appreciate the Midwest ISO's willingness to study with stakeholders the necessity of establishing a minimum size for reserve zones. Particularly here, where a new system of dispersing reserves is being implemented, there is likely to be an initial learning curve and the Midwest ISO and stakeholders will benefit from continuing study

⁷⁵ PJM, for example, uses static reserve zones to manage its market participants' ancillary service obligations.

⁷⁶ The Midwest ISO's filing reflects the stakeholder majority from an August 17, 2007, Market Sub-Committee (MSC) vote. *See* Midwest ISO Proposal, Att. E, Roy Jones Test. at 11-12.

⁷⁷ "[T]here are clear advantages to updating [r]eserve [z]ones on a frequent basis. System conditions change every day, and the ability to deliver Contingency Reserve may be impacted by these changes." Midwest ISO Answer at 47.

⁷⁸ *E.g.*, Wisconsin Electric Comments at 13.

⁷⁹ *E.g.*, Midwest Transmission Customers at 23-26.

of reserve zones. Although we find that a minimum reserve zone size is not currently needed, we acknowledge that too many small reserve zones could be difficult to manage and could potentially have a detrimental effect on the reserve market.⁸⁰ Thus, we direct the Midwest ISO to work with stakeholders and report to the Commission on the merits of instituting a minimum reserve zone size within 180 days after market start. We accept the Midwest ISO's minimum reserve zone requirement and require an informational filing within 180 days after market start.

241. We also find that the Midwest ISO has sufficient flexibility to reconfigure the reserve zones if system conditions warrant. As the Midwest ISO will study the reserve zone requirements on a daily basis and notify market participants 48 hours prior to the operating day, giving 48 hours notice of any reserve zone reconfigurations is a reasonable, analogous prior notice requirement. The day-ahead and real-time reserve zones are expected to be the same configuration so that market participants are able to avoid a situation where an offer or bid in the day-ahead market for a given location is in one reserve zone and then in the real-time market the same location is in a different reserve zone.⁸¹

242. We find that there is likely to be a reliability benefit gained from limiting the amount of regulating reserves provided by a specific supplier in a particular region. It is plausible that, in the Midwest ISO's very large footprint, there are operational issues that could develop if all of the regulating reserves were clustered in one area.⁸² We agree with Ameren that while the Midwest ISO expresses its intent to limit the amount of regulating or contingency reserves carried on a resource to no more than 20 percent of the system-wide requirement, we cannot find where the tariff specifies this requirement. Therefore, we direct the Midwest ISO to clarify whether it intends to use a backstop restriction that no resource may provide more than 20 percent of the system-wide

⁸⁰ Midwest ISO acknowledges the management difficulties of having a large number of very small reserve zones. Midwest ISO Answer at 45. Presently, however, these management issues are outweighed by the deliverability concerns associated with too large of a minimum reserve zone and not warranted based on the market power study.

⁸¹ "The definition and attributes of the Reserve Zones utilized in the Real-Time Energy and Operating Reserve Market for a specific Operating Day will be the same as the definition and attributes of the Reserve Zones utilized in the Day-Ahead Energy and Operating Reserve Market..." See Midwest ISO, FERC Electric Tariff, Third Revised Vol. No. 1, Original Sheet No. 545A and Substitute Third Revised Sheet No. 546.

⁸² Midwest ISO Answer at 48.

requirement for contingency or regulating reserves and, if so, where in the tariff it specifies this requirement. We require the Midwest ISO to submit this clarification in a compliance filing within 30 days of the date of this order.

243. We interpret section 39.2.1A.d(iii) of the Midwest ISO's tariff as allowing a portion of the elemental pricing nodes making up a market participant's load zone to be included in a reserve zone and a portion to be outside the load zone. As for the ratio of market participants' load served at elemental pricing nodes in the reserve zone to their total load in the corresponding load zone, we will not require the Midwest ISO to provide this ratio to market participants. Market participants should be able to calculate their respective portions of the locally-allocated operating reserves costs. The Midwest ISO has committed in the tariff to give market participants at least seven days prior notice of the quarterly configuration of the reserve zones commensurate with the Network Model updates. This is a reasonable amount of time for market participants to understand and calculate which resources, loads, and pricing node are allocated to specific reserve zones. However, we direct the Midwest ISO to clarify, in a compliance filing to be submitted within 30 days of the date of this order, where the results will be published in section 39.2.1A.c of its tariff.⁸³

G. Tolerance Bands

1. Midwest ISO Proposal

244. To ensure that resources follow their dispatch instructions and as a way to settle deviations from those instructions, the Midwest ISO proposes to institute a tolerance band measured against a resource's average telemetered output. The tolerance band is proposed to be +/- 4 percent applied to the sum of the average dispatch target for the previous dispatch interval and the current dispatch interval for energy and regulating reserve.⁸⁴ The Midwest ISO states that before designating the tolerance band, it evaluated confidential data provided by market participants related to actual operating characteristics of units currently providing regulating reserves. The tolerance band has effective limits in that it is conditioned on the excessive energy and deficient energy⁸⁵

⁸³ “[R]esults will be published no less than [seven] days prior to the effective date.” See Midwest ISO, FERC Electric Tariff, Substitute Original Sheet No. 482E.

⁸⁴ Contingency Reserve Deployment Failure charges are defined distinctly and, therefore, are discussed in greater detail below. See *infra* section H.

⁸⁵ Excessive/Deficient thresholds and charges are discussed in more detail below. See *infra* section H.

thresholds being no less than 6 MW and no more than 20 MW for all resources. Small deviations (less than 6 MW) and large deviations (greater than 20 MW) would therefore not be beyond the thresholds, and thus not subject to excessive/deficient energy charges.

245. The Midwest ISO applies these upper and lower tolerance bands to generation resources, DRRs-II or external asynchronous resources. The Midwest ISO proposes the same +/- 4 percent tolerance band for DRRs-I, but it is measured against the targeted demand reduction level for that dispatch interval.

2. Comments

246. Consumers Energy argues that the proposed tolerance bands are too restrictive and instead argues that a tolerance band of +/- 10 percent of the average energy dispatch target adjusted for regulating reserve deployment is more appropriate. Consumers Energy also states that because of the transitional 180-day must offer requirement, a wider band is necessary at least for this interim period. Moreover, Consumers Energy argues that 10 percent is consistent with the Uninstructed Deviation calculations, comports with the generating characteristics in the region, and is the same as the tolerance band used in PJM.

247. Consumers Energy and Ameren argue that evaluation of the tolerance bands for 12 months after market start is too long. Consumers Energy argues that a six-month evaluation period is more reasonable, if the Commission does not direct the Midwest ISO to adopt a 10 percent tolerance band. Ameren recommends a review of the tolerance bands coincident with the expiration of the 180-day must-offer requirement for regulating reserves. Ameren is also concerned that there may not be sufficient deterrence to free-riders under Midwest ISO's proposed performance requirements.

248. Detroit Edison contends that the Midwest ISO's proposal does not recognize that ability to follow set-point instructions does not increase with a generation unit's size. Detroit Edison notes that the Midwest ISO revised the lower threshold upwards from 3 MW to 6 MW since the last ancillary markets filing and states that it does not understand why the concerns of larger units should not be given equal consideration. At a minimum, Detroit Edison requests that the Commission direct the Midwest ISO to revisit the tolerance band issue with stakeholders prior to the start of the ASM and every 60 days thereafter advise the Commission as to the ability of larger generating units to provide regulating reserves without penalty.

249. Detroit Edison states that it supports the 3 consecutive dispatch intervals as the measure of compliance with set-point instructions, but it finds the 20 MW cap and the +/- 4 percent tolerance band unjustified and discriminatory to larger generating units. Therefore, Detroit Edison requests that the Commission reject the 20 MW cap and leave in place a deviation ceiling based on a fixed percentage of unit capability.

250. Reliant & Dynegy argue that reducing the tolerance band to 4 percent will increase the risk that older, less flexible generation units are subject to penalties, which when combined with the must offer requirement may mean that older generators will offer a lower ramp rate. These lower ramp rates will reduce the efficiency of regulation service and may lead generators to include a risk premium in their offers. In addition, they dispute that the proposed tolerance band is the product of stakeholder compromise because the Midwest ISO did not conduct a stakeholder vote on the proposed tolerance band. Reliant & Dynegy assert that the Midwest ISO has not sufficiently justified its proposed tolerance band with any data analysis in stakeholder meetings or in its filing demonstrating the possible impacts of reducing the tolerance band from 10 to 4 percent. They also question why the Midwest ISO region's resource make-up is so different from PJM that a different tolerance band is appropriate.

251. FirstEnergy generally supports the proposed tolerance bands, calling both of them reasonable and achievable. However, FirstEnergy believes that it would be in the best interests of the market to allow larger tolerance bands for pumped-storage units that are capable of providing a significant portion of their overall capacity as regulation capacity. Likewise, Indianapolis P&L requests that the Commission direct the Midwest ISO to amend its proposal to accommodate different operational characteristics that require a wider tolerance band, in particular, older coal-fired units that were not built to respond to 5 minute dispatch signals.

252. The OMS requests that the Midwest ISO provide more support demonstrating the optimality of the proposed tolerance band. The OMS requests that the Commission direct the Midwest ISO to provide an analysis, by owner or generator type and size, if possible, of the impact of a 2 percent versus a 4 percent tolerance band on the number and diversity of market participants and overall costs for stakeholder review. If the Commission or the Midwest ISO finds that the proposed tolerance band is not optimal, then the OMS suggests that the Midwest ISO should consider alternatives such as tolerance bands that vary based on generator type or size.

3. Answers

253. The Midwest ISO states that in setting the tolerance band it must weigh two primary considerations. First, too narrow of a band would prevent resources from complying due to physical operating limitations. Second, too wide of a band would encourage free-riders and, more importantly, negatively impact reliability via poor load following and regulation response, and could increase costs through higher reserve requirements to build in a margin of safety in operations. The Midwest ISO states that the proposed tolerance band is a product of compromise, but it would be open to assessing the performance of the proposed tolerance band and exploring potential alternatives following the first 90 or 180 days of market operation.

254. Ameren responds that while it appreciates the Midwest ISO's openness to reevaluating the tolerance band, it believes that a clear directive from the Commission is needed to ensure that this evaluation occurs. Ameren would like a report within 180 days of market start that evaluates whether the tolerance bands are providing a sufficient deterrent to free-riders or others who offer a product without the capability to provide that product in accordance with the Midwest ISO's instructions.

4. Commission Determination

255. The essence of setting a reasonable tolerance band is finding the appropriate balance between respecting the physical operating characteristics of generating units in the market and minimizing the incentive to over- or under-produce and "free-ride" on the market's collective energy and reserves. In a perfect scenario, resources would follow instructions exactly. However, it is well-established that resources cannot follow dispatch instructions exactly due to the nature by which generation output varies over time. Therefore, it is essential that the Midwest ISO propose a reasonable amount of flexibility around its dispatch instructions so that resources can comply, without giving those same resources free rein to operate at any level of their choosing. There is also a reliability concern because the system operator must know, to the closest extent possible, which resources it can count on and for what amount.

256. Unfortunately, there is no industry standard for the optimal balance between avoiding undue financial burdens on generating units due to physical operational constraints beyond their control and deterring market participants from not following dispatch instructions. As noted by commenters, the tolerance band in PJM is 10 percent. However, the Midwest ISO is allowed under section 205 of the FPA to propose a reasonable tolerance band that ensures it can reliably co-optimize energy and operating reserves and dispatch the system while respecting its system constraints. Thus, we find that the Midwest ISO has provided sufficient reasoning for us to support a +/- 4 percent tolerance band, and we accept it. In addition, we accept the limits on the tolerance band of a 20 MW maximum and a 6 MW minimum as reasonable.⁸⁶ Under the Uninstructed Deviation Penalty paradigm, there is a 25 MW maximum and a 5 MW minimum that effectively limit the applicability of those charges.⁸⁷ We find that the maximum and minimum in the instant proposal are substantially similar in purpose and scope.

⁸⁶ We note that, after reviewing actual operating data provided by market participants, the Midwest ISO revised the minimum and maximum from 3 MW and 6 MW respectively. *See Roy Jones Test.* at 115.

⁸⁷ Prior to the revisions in the instant proposal, deviations from dispatch instructions had a tolerance band of +/- 10 percent and deviations beyond that tolerance

(continued...)

257. The Midwest ISO also states that it is open to assessing the effectiveness of the tolerance band after 90 or 180 days of market operation. We support evaluating performance compliance provisions like the tolerance band, but we are not convinced that 90 days of market operation is enough time to obtain sufficient data about the effects of the tolerance band. Unit operating performance changes with corresponding changes in the weather, among other factors. Further, the make-up of resources available to the system operator due to forced outage rates will vary over time and this variability will appear in the ability of units to respond to the dispatch instructions. Therefore, we direct the Midwest ISO to evaluate the tolerance band and, in particular, the empirical data that shows how often units violate the tolerance band in three consecutive dispatch intervals so that those units are subject to the excessive and deficient energy charges, and submit a report to the Commission within 180 days from the inception of co-optimized energy and ASM operations. This informational report may be filed along with the other 180-day items directed herein, and the report should list any changes the Midwest ISO believes are necessary. We note that this directive neither mandates changes nor precludes the Midwest ISO from filing before 180 days if it determines the need for immediate changes to the tolerance band.

H. Excessive/Deficient Energy Deployment Charge and Contingency Reserve Deployment Failure Charge

1. Midwest ISO Proposal

258. The Midwest ISO proposes to charge a resource an Excessive/Deficient Energy Deployment Charge in any hour when the resource's average telemetered output over the dispatch interval is outside the tolerance band in at least three consecutive dispatch intervals. Any credits from the Excessive/Deficient Energy Deployment Charge will be allocated to all market participants pro-rata on a load ratio share basis, excluding their export schedules. The charges for excessive and deficient energy replace the Uninstructed Deviation Penalties. However, the exemption for intermittent resources, such as solar and wind, remains intact. In addition, all resources are exempt from these charges if events beyond their control cause the resource not to be able to follow instructions, such as emergencies, resources in test mode or when a generator trips and goes off-line.

259. The Midwest ISO also proposes to charge a Contingency Reserve Deployment Failure Charge to any resource that does not deploy contingency reserves in an amount equal to or greater than its deployment instruction within the deployment period. This

band were subject to Uninstructed Deviation Penalties pursuant to section 40.3.4 of Module C of the Midwest ISO's tariff.

charge will be equal to the resource's shortfall amount multiplied by the hourly ex post locational marginal price of the commercial pricing node for the hour when the failure occurred. Any credits from the collection of the Contingency Reserve Deployment Failure Charge will be allocated to all market participants pro-rata on a load ratio share basis.

260. The Excessive Energy Threshold is proposed to be adjusted so that it is no less than 6 MW or no greater than 20 MW plus the sum of the average dispatch targets for energy for the current and previous dispatch interval and the average regulating reserve deployment instruction for that dispatch interval. The Deficient Energy Threshold is adjusted so that it is no greater than the sum of the average of the energy dispatch targets for the current and previous dispatch interval and regulating reserve deployment instruction minus 6 MW or no less than the sum of the average dispatch targets for energy for the current dispatch interval and the previous dispatch interval and the average regulating reserve deployment instruction for that dispatch interval minus 20 MW, but the Deficient Energy Threshold cannot be less than zero.

2. Comments

261. The OMS proposes a modification to the tolerance band standard so that the Excessive/Deficient Energy Deployment Charges would apply if the generator fails to stay within the tolerance band for a given number of dispatch intervals within the hour, regardless of whether or not those violations are consecutive. Also, the OMS requests that the Midwest ISO clarify its intent with regard to market behavior inducements caused by the inclusion of Excessive/Deficient Energy Deployment Charges in RSG and the pricing of the charges, their calculation, and their applicability.

262. Ameren argues that there are numerous problems with the charge in section 40.3.4.b of the Midwest ISO's proposed tariff. This section refers to the charge associated with all of the regulating reserve credits paid to the resource plus a charge that is equal to the total output of the resource multiplied by the sum of all credits made for regulating reserve divided by all withdrawals. First, Ameren believes that the numerator, total output, does not correspond with the denominator, all withdrawals, so that there is a potential mismatch of charges and credits. Xcel requests that another exemption for Excessive/Deficient Energy Charges be added to section 40.3.4.d.v of the Midwest ISO tariff for times when market participants are "following manual dispatch instructions from the Midwest ISO."

263. Consumers Energy and Reliant & Dynegy request that the Commission direct the Midwest ISO to revise section 40.3.4 of its tariff to clarify that the term "actual injections" only refers to a specific product such as regulating, spinning, or supplemental reserves, and not the injections of the entire unit. Duke and Ameren assert that any penalties for deviations should only apply to the amount a generator exceeds the

tolerance band, not the entire amount of energy injected. Duke also notes that Order No. 890 adopts a graduated bandwidth approach for assessing penalties on generation and energy imbalances. Hoosier & Southern Illinois contend that the charge should be applied to the resource's actual energy injection rather than the amount of the excessive/deficient energy. Hoosier & Southern Illinois state that the effect of the Midwest ISO's proposed provision is to penalize resources differently for the same amount of excessive/deficient energy, i.e., a generator injecting 500 MW incurs a five-times greater penalty than a generator injecting 100 MW.

264. Hoosier & Southern Illinois also contend that the complexity of the market design, including the Excessive/Deficient Energy Charges/Credits will make dispute resolution almost impossible for small market participants. They assert that approval of this rate would be contrary to Commission precedent stating "tariff rates must be ... specific enough for any reasonably knowledgeable party to be able to calculate for itself what charge will be produced by the formula." Finally, they argue that it will be very difficult for generators to accurately predict their dispatch band. Although Hoosier & Southern Illinois acknowledge that they could forgo the use of the dispatch band model, they state that this may subject the generator to dispatches beyond its ramp capability leading to Excessive/Deficient Energy Charges.

265. Midwest Transmission Customers assert that the Commission should reject the Contingency Reserve Deployment Failure Charges, as applied to DRRs, as unreasonable. Midwest Transmission Customers also seek clarification from the Midwest ISO as to whether or not such charges apply at times when the Midwest ISO commits DRRs-I. In addition, the Midwest Transmission Customers contend that the Midwest ISO has provided conflicting interpretations of how it intends to treat DRRs-I. In particular, they argue that there is a disconnect between the testimony of Roy Jones⁸⁸ and the proposed tariff language with regard to the calculation of liabilities for contingency reserve failure charges for DRR-I outputs.

3. Answers

266. The Midwest ISO responds to commenters' assertion that the Excessive/Deficient Energy Charges should apply to only the portion that is excessive or deficient, and not the total actual injection. The Midwest ISO states that the charge is designed to provide financial incentives to resources to follow dispatch instructions. According to the Midwest ISO, generation resources that do not follow dispatch instructions create a regulating reserves burden and, therefore, those resources should share in the cost of

⁸⁸ See Midwest ISO Proposal, Att. E at 68.

procuring regulating reserves with load.⁸⁹ In response to the OMS' request for clarification, the Midwest ISO states that it has proposed allocating RSG charges to resources based on the absolute value of the excessive or deficient energy supplied by these resources. The Midwest ISO also notes that it has proposed to settle excessive or deficient energy at the lesser of the locational marginal price or the offer to remove the incentive for resources to oversupply by removing any potential margins to be gained by supplying beyond the tolerance band.⁹⁰

4. Commission Determination

267. Conceptually, we understand that when reserves are provided by the market there is an incentive not to purchase them and to instead rely on the collective purchases of other market participants. Therefore, the Midwest ISO needs to provide a financial disincentive for non-compliance with set-point or dispatch instructions. Another consideration is that the Midwest ISO needs entities to comply with dispatch instructions in order to reliably operate the transmission system. We find it reasonable to include a disincentive rate or compliance mechanism to ensure that dispatch instructions are followed to the extent that physical operating restrictions of resources will allow. We also find it reasonable to limit the use of the charge to instances where the violation has occurred in three consecutive dispatch intervals. Requiring three consecutive dispatch intervals aligns the financial disincentive with its intent, to avoid repeated conduct outside the tolerance band that would implicate free rider and reliability concerns, respectively. The Commission expressed a similar sentiment when accepting the Uninstructed Deviation Penalties, which these charges replace.⁹¹

268. We do not agree with commenters that an additional exemption from the charges is needed when resources are following manual dispatch instructions⁹² from the Midwest ISO. The same reasoning behind the charges applies whether dispatch instructions are

⁸⁹ Midwest ISO Answer at 53.

⁹⁰ *Id.* at 54.

⁹¹ “Although market forces provide an incentive to follow dispatch instructions most of the time, we continue to believe that a penalty system will aid in the Midwest ISO’s ability to maintain system reliability in real time by dissuading generators from excessively deviating from their dispatch instructions.” TEMT II Order, 108 FERC ¶ 61,163 at P 533 (internal citation omitted).

⁹² See Midwest ISO, FERC Electric Tariff, Module A, section 1.176b “Manual Redispatch: The Transmission Provider’s issuance of Dispatch Instructions created other than through the automated SCED computer software.”

issued manually or through Security Constrained Economic Dispatch (SCED) solutions. We also note that the tariff includes a general exemption from all such charges “during events or conditions beyond the control, and without the fault or negligence, of the Market Participant including but not limited to: (1) Emergencies; (2) Test mode of the Resource; (3) start-up or shut down mode; (4) the hour when a generation resource trips and goes off-line; or (5) during a contingency reserve deployment.”⁹³ These provisions ensure that the Midwest ISO has sufficient flexibility to exempt market participants from any dispatch charges for circumstances beyond their control.

269. Moreover, we disagree with commenters that the Midwest ISO should not base the charges and credits on “actual” injections by resources. As noted by the Midwest ISO in its answer, “[t]he Excessive/Deficient Energy Deployment Charge has been designed to provide financial incentives to Resources to follow dispatch in an hour (i.e., operate, on average, so as not to fall outside their tolerance band for three or more consecutive Dispatch Intervals within an hour). Resources that do not follow dispatch create a regulation burden and should share the cost of procuring Regulating Reserve with load.”⁹⁴ We agree, and do not find that sufficient financial incentive will be provided by basing the charge solely on the amount of energy or reserves that falls outside the tolerance band. A resource’s Excessive/Deficient Energy Deployment Charge is calculated by: Actual Energy Injection for the hour times the Excessive/Deficient Charge Rate, plus the Regulating Reserve credits for that hour. The Excessive/Deficient Charge Rate is a ratio with Regulating Reserve Credits and Charges in both the Day-Ahead and Real-time market in the numerator and all withdrawals in the denominator. Therefore, the rate calculation will use Actual Energy Injections in the numerator and Actual Energy Withdrawals in the denominator.⁹⁵ However, we direct the Midwest ISO to provide further clarity to section 40.3.4.b.i of its tariff by specifying the units used in the charge (i.e., MW or MWh), to which party those charges are directed, and when those charges are applied in a compliance filing to be submitted within 30 days of the date of this order. In addition, we direct the Midwest ISO to include a formula calculation, as an example only, of how an Excessive/Deficient Energy Deployment Charge will be constructed, in a compliance filing to be submitted within 30 days of the date of this order.

⁹³ See Midwest ISO, FERC Electric Tariff, Module C, at Second Revised Sheet Nos. 587A – 587A.01.

⁹⁴ Midwest ISO Answer at 53.

⁹⁵ See Midwest ISO, FERC Electric Tariff, Second Revised Sheet Nos. 585-86. For example, Excessive/Deficient Charges = (Actual Energy Injection x Excessive/Deficient Charge Rate) + Regulating Reserve Credits. Excessive/Deficient Charge Rate = (Regulating Reserve Credits or Charges/Actual Energy Withdrawals).

270. Our interpretation of the tariff is that the contingency reserve deployment failure charge does apply to times when the Midwest ISO commits DRRs-I. Section 1.39a defines the Contingency Reserve Deployment Failure Charge as “[a] charge assessed to any Resource...” A Resource is defined in section 1.273 to include: “a [DRR-1].” Matching the general tariff definitions in Module A with the specific provisions in Module C, section 40.3.4e confirms this applicability and, therefore, no further clarification of this section is needed.⁹⁶

I. Must Offer Requirement

1. Must Offer Obligation

a. Midwest ISO Proposal

271. The Midwest ISO proposes a transitional obligation for market participants to submit offers or self-schedules for regulating reserves from qualified designated network resources for 180 days from market start. In addition, the Midwest ISO proposes an ongoing obligation for market participants to offer contingency reserves from designated network resources in conjunction with the energy offer requirement currently in effect. The Midwest ISO also provides further clarifications in response to the Guidance Order’s recommendations and provides details regarding the ramp rates and offer parameters applicable to reserve offers.

272. The must offer obligation applies to the day-ahead energy and operating reserve market, and the first reliability assessment commitment process, but provides exceptions when a designated network resource is physically unable to provide such reserves due to forced or planned outages or other operating restrictions. Market participants do not have an obligation to offer in the real-time market or an obligation to offer from any portion of generating resources that are not designated as network resources.

b. Comments

273. The Midwest TDUs request that Midwest ISO be directed to analyze the effect of the sunset of the must offer requirement for regulating reserves and report on any effects 6 months after the requirement expires, including whether or not to reinstate the requirement.

274. FirstEnergy states that it supports the 180-day must offer requirement provided that the market starts on June 1, 2008. However, if market implementation is delayed until the fall of 2008, FirstEnergy believes that a 60-day must offer requirement is

⁹⁶ See *Id.* at section 587A.01.

sufficient because market participants will be able to use the additional time to gain familiarity with the market's mechanics. Also, FirstEnergy asserts that the testimony of Roy Jones supports economic incentives to provide regulating reserves after market participants are comfortable with market operations. Xcel asks the Commission to direct the Midwest ISO to specify the criteria under which regulating reserves will be deployed, for example, considering economics or ramp rates.

275. In addition, FirstEnergy states that sections 39.1.1A and 40.1.2 of the Midwest ISO's tariff provide that offers to supply regulating reserves are to be consistent with the business practices manual, and that the relevant manual requires resource owners to offer to supply regulating reserves up to the "physical capabilities" of the unit, which is an undefined term. FirstEnergy is concerned that this provision suggests that resource owners are required to offer at the maximum ramp rate of each unit and at the maximum capacity of each unit which would cause unnecessary wear and tear, forced outages, and higher overall operating and maintenance costs. FirstEnergy asserts that resource owners should be able to limit their offers to be consistent with the operating characteristics of their units, and to ensure that withholding does not occur, the IMM should calculate the amount of regulating reserve currently being provided by the unit. Such units should not be required to supply more regulating reserves than they are currently providing, but other units that have not traditionally offered this reserve product, such as independent power producers, should be subject to the maximum capability limitation until a track record of operation is established.

276. Detroit Edison argues that the must offer requirement should expire in 180 days for contingency reserves in the same way it expires for regulating reserves. Detroit Edison asserts that it is erroneous of the Midwest ISO to assume that market participants submitting both energy and contingency reserve offers from network resources will respond identically to the same price signals. It asserts that in a properly designed market, suppliers of contingency reserve will participate voluntarily with the correct price signals.

277. Midwest Transmission Customers argue that the Midwest ISO has not supported its proposal to have the must offer requirement for regulating reserves expire in 180 days beyond stating that it will give market participants time to gain experience with the new markets.

278. Hoosier & Southern Illinois state that, as network resource owners, they are concerned that having the Midwest ISO sending regulation signals as the Balancing Authority will cause increased wear and tear on their equipment. Hoosier & Southern Illinois recognize that output levels varied on equipment providing regulation service before the introduction of the ASM, but they state that they could, as their own Balancing Authority, decide which units should increase or decrease their output at any given time,

presumably reducing required maintenance because they would know the particular condition of the units chosen. Hoosier & Southern Illinois state that they will lose this ability under the ASM.

279. According to Hoosier & Southern Illinois, the fact that the Midwest ISO needs to compel units to participate in the market casts doubt on the Midwest ISO's claim that the market design will send the proper pricing incentives to make resources want to participate and thereby maximize their returns. They recommend that the Midwest ISO rely on the ASM designs already in use in other RTOs, such as PJM, which they note does not have a must offer requirement.

280. Ameren supports the regulation service must offer provisions, but it is concerned that the provisions will cease at the end of the 180-day transition period without any evaluation of the potential reliability impacts. Southwestern also supports the transitional must offer requirement, but it believes that 180 days is too short. Ameren further asserts that the must offer provisions should not be eliminated until the Midwest ISO has determined that the must offer provision is no longer needed through a report to the Commission detailing its findings with regard to: (1) whether offers exceed the required amount of regulating reserves region-wide and in the sub-zones; (2) whether regulation capabilities have limited market activities; and (3) whether the performance of operating reserve providers has negatively impacted the market. If the results of the report indicate that adequate regulating reserves will not be available after the must offer requirement expires, Ameren asserts that the Midwest ISO should be directed to continue the must offer requirement until it is demonstrated that sufficient quantities of regulating reserves will be offered into the markets. Ameren also asserts that if a DRR-I is listed as a designated network resource, then those resources should be subject to the same offer parameters as any other resource, including the must offer provisions.

281. Consumers Energy asks the Commission to require the Midwest ISO to remove the must offer requirement for contingency reserves. Although Consumers Energy does not believe a transitional must offer requirement is necessary for regulating reserves, it does believe that it is an acceptable transition mechanism. Consumers Energy argues that must offer requirements force generators with performance limitations into the market, which subjects them to the risk of penalties. In effect, Consumers Energy argues, a generating unit is forced to offer a more specific product than it can physically provide.

282. Consumers Energy also questions the rationale provided by the Midwest ISO for a transitional must offer for regulating reserves because the market will provide economic incentives to ensure adequate supply and a permanent must offer for contingency reserves because the generators could submit offers for energy, but not contingency reserves. Consumers Energy concludes that the Midwest ISO must believe that the IMM is capable of adequately monitoring the regulating reserves market, but not the contingency reserves market. Consumers Energy asserts that the IMM can monitor the contingency reserves

market and, unless it demonstrates that it cannot, the costs to generators of the contingency reserves must offer outweigh the Midwest ISO's rationale. Consumers Energy argues that correct market signals should ensure that only those resources capable of providing the product are cleared for supplying the product.

283. Concerning proposed section 40.2.5.4 of the Midwest ISO's tariff (at line 12), Wisconsin Electric seeks clarification that the sentence "Dispatch Band limits and ramp rates may be updated for a specific Hour no less than thirty (30) minutes prior to the beginning of the Hour" means that dispatch band limits and ramp rates can be specified with an hourly profile throughout an operating day, consistent with hourly limits and ramps. Also, concerning proposed section 40.2.5.d (at line 15), Wisconsin Electric seeks clarification whether "[d]ispatch band limits *must*" should be "[d]ispatch band limits *may*" and whether this provision applies to each individual dispatch band or across a series of dispatch bands of a resource.

284. Reliant & Dynegy state that they would support a must offer obligation for a 180-day transition period for both regulating and contingency reserves. Reliant & Dynegy also request clarification of tariff section 40.1.2.b, Transitional Designated Network Resource Obligation – Regulating Reserve, because they are unclear if it could be interpreted as requiring generating resources to provide regulating reserve service at a unit's maximum physical capability. In addition, Reliant & Dynegy request clarification whether all regulation qualified resources must submit offers, and how much capacity the Midwest ISO wants allocated to ancillary services products, given uncertainties such as whether reducing ramp rates indicates withholding.

c. Answers

285. The Midwest ISO responds that it continues to believe that the transitional must offer requirement for regulating reserves is needed to allow for operational experience to be gained by the Midwest ISO as the sole balancing authority and operating reserve market operator, and to allow market participants to gain experience submitting offers or self-schedules into the new market.

286. In addition, the Midwest ISO asserts that the must offer requirement for contingency reserves is needed on an ongoing basis because both energy and contingency reserves involve capacity only, whereas regulating reserves require both resource capacity and regulation capability.⁹⁷ The Midwest ISO states that it will specify the regulating reserves deployment methodology in the business practices manuals. The Midwest ISO emphasizes that the intent of the must offer requirement is to require market participants to offer the network resource capacity, and, therefore, the must offer

⁹⁷ Midwest ISO Answer at 80-81.

requirement should apply to both energy and contingency reserve. The Midwest ISO posits that without the must offer requirement for contingency reserves, a network resource with high energy costs may clear the market for energy in lieu of the contingency reserves which would drive up the costs to the market.

d. Commission Determination

287. In the Guidance Order, we generally supported the transitional must offer as an aid to ensure a smooth market launch.⁹⁸ Here, we accept the Midwest ISO's proposal to implement a transitional 180-day must offer requirement for regulating reserves and we support a permanent must offer requirement for network resources to provide contingency reserves. We find that the Midwest ISO's proposal is substantially similar to that addressed in the Guidance Order and that the reasoning behind the must offer for regulating reserves is sound. Moreover, we agree with the Midwest ISO's reasoning that 180 days of experience with actual market operations is necessary, particularly with the added complexity of consolidating the balancing authority functions, and that this experience cannot be gained by market participants merely understanding that regulating reserves must be offered at some point in the future.⁹⁹ Thus, we will not adopt the commenter's suggestion that if market implementation is delayed beyond June 1, 2008, then a transition period of less than 180 days is necessary.

288. Further, in the Guidance Order, the Commission noted that if the Midwest ISO was deficient in contingency reserves it would still have to procure them, but it may have to do so at a higher cost.¹⁰⁰ The Commission also noted that it would evaluate the need for a permanent must offer in light of the long-term resource adequacy proposal.¹⁰¹ Thus, we will accept the must offer requirement in this order while noting that this provision would be implicated by the filing of a revised resource adequacy proposal. Resource adequacy is governed by Module E, which contains the contingency reserves must offer requirement, therefore, changes are possible based on the outcome of the revised resource adequacy filing.

⁹⁸ See Guidance Order, 119 FERC ¶ 61,311 at P 116.

⁹⁹ See Midwest ISO Proposal, Att. E, Roy Jones Test. at 32-33 ("This 180 day period will allow time for operational experience to be gained by the Midwest ISO as the Balancing Authority and with the Energy and Ancillary Services Markets operations, and will allow Market Participants to gain experience in submitting Operating Reserve Offers or Self-Schedules into the Market.").

¹⁰⁰ See Guidance Order, 119 FERC ¶ 61,311 at P 117.

¹⁰¹ *Id.*

289. In addition, the Guidance Order stated that the Commission was encouraged that the Midwest ISO had responded to several commenters' questions regarding the proposal for a must offer, but that several issues remained unaddressed by the Midwest ISO.¹⁰² The Midwest ISO's proposal and answer address many of the questions posed in our Guidance Order.

290. In response to commenters' concerns about the applicability of the must offer requirement, we conclude that under the Midwest ISO's tariff any resource designated as a Network Resource is subject to the must offer requirement in Module E. As noted by the Midwest ISO in its answer,¹⁰³ both types of DRRs cannot be designated as Network Resources, which would then preclude them from the must offer requirement. We find that the Midwest ISO's answer aligns and clarifies the must offer provisions and the DRR provisions.

291. Several commenters question whether the Midwest ISO, through the must offer requirement, will be able to demand more of generating units than those units can physically provide or otherwise ask them to operate in a manner that increases their maintenance and operation costs. After examining the flexible offer parameters available to generating resources under the tariff, we conclude that generators will have sufficient flexibility in the physical operation of their units and the Midwest ISO will have the ability to operate the system reliably. For example, section 39.2.5 of the Midwest ISO's tariff, which covers generation offers, allows a market participant to specify: hourly ramp rates, hourly economic minimum and maximum limits,¹⁰⁴ hourly regulation minimum

¹⁰² *Id.* P 118 (“For the future filing, we advise the Midwest ISO to consider responding to commenters’ concerns regarding ramp rates, offer parameters, and the requirements of market participants beyond the initial 180-day period.”) (internal citation omitted).

¹⁰³ *See* Midwest ISO Answer at 57 (“[DRRs] cannot be designated as a Network Resource. Interruptible demand can be designated as Alternative Capacity Resources, in which case it must either offer as a [DRR] or be available to respond to load curtailment instructions....”); *see also id.* at 70 (“From a Resource Adequacy standpoint, the proposed Tariff allows for interruptible demand to be designated as an Alternative Capacity Resource, but not a Network Resource under Module E.”).

¹⁰⁴ *See* Midwest ISO, FERC Electric Tariff, Original Sheet No. 492B (stating that Hourly Economic Maximum “shall not be used to withhold a portion of the Capacity of a Resource from the Day-Ahead Energy and Operating Reserve Market if such Capacity is designated as a Network Resource... unless such portion is unavailable due to a forced or planned outage or *other physical operating restrictions*”) (emphasis added).

and maximum, minimum and maximum run times, and many other operating parameters. We note that withholding through specified maximums is excluded for portions of resources designated as network resources, but we find that the exception for outages and physical operating restrictions is sufficient to ensure that the Midwest ISO will not operate resources in an imprudent manner. Clearly, however, during the asset registration process, it will be essential that market participants coordinate with the Midwest ISO so that any default parameters do not result in detrimental dispatch instructions.¹⁰⁵

292. Additionally, in the real-time physical market, generation resources are able to specify – in addition to the default limits and hourly limits – dispatch bands that detail the physical limits and ramp rates for each generation unit.¹⁰⁶ A resource may offer up to 12 dispatch bands or one dispatch band per 50 MW of capacity. A market participant is permitted to update its specific dispatch bands during any commercial model update that occurs eight times per year and the market participant may update ramp rates and resource limits associated with any band hourly, up to thirty minutes prior to the start of the operating hour. These provisions in combination will enable market participants, in coordination with the Midwest ISO, to ensure that their units are dispatched reasonably below physical maximum limits, except in cases of system emergencies.

293. Finally, in response to Wisconsin Electric’s request for clarification regarding dispatch band limits, we direct the Midwest ISO to clarify its intent regarding the two provisions in Module C, Sheet 555Z, Section 40.2.5.d, line 12 and line 15 in a compliance filing to be submitted within 30 days of the date of this order.

2. Participation Status of Resources

a. Midwest ISO Proposal

294. The Midwest ISO’s proposed tariff provisions state that spinning and supplemental reserve offers must specify their dispatch status as economic, self-schedule or not qualified.

¹⁰⁵ For any of the offer characteristics, the Midwest ISO specifies that in the absence of a market participant’s offer, the Midwest ISO will use a default offer specified by the market participant during the asset registration process.

¹⁰⁶ The Midwest ISO has included substantial offer detail regarding all resources and their respective reserve products in new tariff sheets, particularly, Original Sheet No. 555 – Original Sheet No. 555Z.08.

b. Comments

295. Ameren contends a resource that is not a designated Network Resource should be able to not participate even if it cleared in the day-ahead markets, and if it decides not to participate, it should be required to buy back the day-ahead awarded MWs in the real-time market.

c. Answers

296. The Midwest ISO responds that its market rules allow a resource that is not a Network Resource the option of not offering a resource into the market by selecting a commitment status of not participating. However, if the resource is offered, then the resource must offer energy and spinning and supplemental reserve, according to the Midwest ISO. The Midwest ISO further explains that if a market participant decides to offer capacity from a resource, it must offer all products for which the resource is qualified so long as the products require only the use of capacity.

297. Ameren responds by objecting to the must offer requirement for resources that are not Network Resources, noting that the participation of these resources is voluntary. For this reason, Ameren recommends that this requirement be eliminated.

d. Commission Determination

298. We consider the Midwest ISO's response that there is no must offer requirement for spinning or supplemental reserves that are not designated resources to be responsive to Ameren's concern. Accordingly, we require the Midwest ISO to clarify that in sections 39.2.5.b.xxvi and xxvii of its tariff market participants can select a commitment status of 'not participating' in addition to the 'economic,' 'self-schedule' and 'not qualified' status designations. We require the Midwest ISO to submit this clarification in a compliance filing to be submitted within 30 days of the date of this order.

J. Resource Adequacy**1. Long-Term Resource Adequacy Filing****a. Midwest ISO Proposal**

299. The Midwest ISO has proposed, for the most part, minor changes to Module E, with the exception of the must offer requirement, which is discussed in greater detail herein. In the Guidance Order, the Commission provided guidance on the February 15,

2007, Attachment A filing by the Midwest ISO and advised that the Commission will address long-term resource adequacy in the Midwest ISO when a comprehensive Phase II resource adequacy proposal is filed in December 2007.¹⁰⁷

b. Comments

300. FirstEnergy states that if new resources are to be maintained and new resource investment is to be initiated, then the Midwest ISO must ensure that its resource adequacy plan is workable with the market forces that exist in states like Ohio where retail electric competition exists. Load serving entities in competitive states may lack the option to have rate base recovery for new resource investment. According to FirstEnergy, this requires the development of market mechanisms to provide appropriate incentives to invest in generation capacity. FirstEnergy asserts that the Midwest ISO can add to the cost-effectiveness of meeting resource adequacy standards by providing an efficient mechanism for price transparency and transaction support.

301. The OMS comments that the Midwest ISO should be required to demonstrate how the demand curves used in scarcity pricing for short-term reliability will also ensure long-term resource adequacy. The OMS notes that Midwest ISO has stated that these demand curves will send the proper price signal in both the short and long-term. Therefore, the OMS asks the Commission to specifically condition any approval of demand curves, offer caps, and VOLL on the Commission's findings based on the Midwest ISO's demonstration in its long-term resource adequacy filing that the short-term prices derived from demand curves will result in incentives that ensure long-term resource adequacy.¹⁰⁸

302. The Midwest ISO answers that it agrees with the Commission's prior guidance that the justness and reasonableness of the ASM proposal can be evaluated independent of the long-term resource adequacy filing.¹⁰⁹ As a result of the guidance, the Midwest ISO asserts that it does not need to establish that scarcity pricing and demand curves, which provide the incentives to ensure short-term reliability, also ensure long-term reliability through adequate resource investment.

¹⁰⁷ See Guidance Order, 119 FERC ¶ 61,311 at P 136-38.

¹⁰⁸ The OMS notes that the Indiana Commission and the Indiana Office of Utility Consumer Counselor disagree with the conclusions reached with respect to the linkage between demand curves and long-term resource adequacy issues. See OMS Comments at 18 n.30.

¹⁰⁹ Midwest ISO Answer at 93-94.

c. Commission Determination

303. We agree with the Midwest ISO's answer and, consistent with our prior guidance,¹¹⁰ the ASM filing can be reviewed independently of the long-term resource adequacy filing, as discussed herein. The justness and reasonableness of the Midwest ISO's proposal to ensure that adequate operating reserves are maintained on an operating day basis can be decided independently of a Commission determination on the long-term resource adequacy plan in the Midwest ISO. We note that the Midwest ISO has submitted a filing that addresses its long-term resource adequacy plan and we will address all related issues, such as planning reserves, in that proceeding.¹¹¹

2. Scarcity Pricing and Resource Adequacy

a. Comments

304. The OMS urges the Commission to condition any approval of the demand curves, offer-caps, and VOLL on the Commission's findings resulting from the Midwest ISO's demonstration, in its long-term resource adequacy filing, that the prices and the resulting demand curves used to provide the proper incentives for short-term reliability will also provide the proper incentives for longer-term resource adequacy. Indianapolis P&L similarly notes that the Commission has stated that it is necessary to have a complete market design proposal to make a finding that the combination of resource adequacy requirements, market power mitigation, and scarcity pricing is just and reasonable. Indianapolis P&L agrees that resource adequacy must be designed to work together with other elements of the regional market design such as market power mitigation measures, demand response programs, and any scarcity pricing measures. The OMS and Indianapolis P&L argue that the Midwest ISO must eventually tie both the resource adequacy provisions and scarcity pricing together to demonstrate that the curves are properly set for both short-term reliability and longer-term resource adequacy.

305. The OMS requests that the Commission's approval of the demand curves, offer caps, and VOLL be contingent upon any needed further revisions resulting from the Commission's findings regarding the Midwest ISO's demonstration in its long-term resource adequacy filing that the prices and the resulting demand curves used to provide the proper incentives for short-term reliability will also provide the proper incentives for longer-term resource adequacy. The OMS argues that until the Midwest ISO

¹¹⁰ Guidance Order, 119 FERC ¶ 61,311 at P 137.

¹¹¹ See Midwest ISO December 28, 2007 Filing, Docket No. ER08-394-000 (filing to comprehensively address resource adequacy requirements). The Midwest ISO has requested a March 27, 2008, effective date for its resource adequacy proposal.

demonstrates how the resulting market prices provide the proper financial incentives in the bigger picture of long-term resource adequacy, the selection of these price levels, and the resulting demand curves, appear to be arbitrary.

306. Indianapolis P&L argues that in order to provide an incentive for new construction, contracting, or demand response, scarcity pricing must have a significant enough economic impact. Noting that the prices would only be in effect an estimated 20 to 30 hours a year, Indianapolis P&L contends that if scarcity pricing does not occur often enough to influence market participant behavior, then the scarcity price would be an additional, unnecessary, and unsupportable expense. Indianapolis P&L states that projects are unlikely to be built in response to short-term signals and a price of \$3,500/MWh, for the estimated 20 to 30 hours a year, would not therefore accomplish the stated objective of providing an incentive for new construction, and would instead present a greater opportunity for unjust and unreasonable prices. Southwestern adds that scarcity pricing and demand curves have not been shown to result in the construction of additional capacity.

307. Several market participants contend that the long-term resource adequacy plan will have an impact on revenues from the Midwest ISO run markets and may require the Midwest ISO to revise its demand curves.¹¹² Midwest TDUs argue that the Midwest ISO's energy and ancillary services markets are not the only or even primary method of ensuring resource adequacy and that equally if not more important are fixed-cost recoveries from the inclusion of generation in rate base and long-term contracts, both of which are encouraged by LSEs' securing capacity to satisfy mandatory resource adequacy requirements. Midwest TDUs and Indianapolis P&L contend that the VOLL and the revenue produced by the resulting clearing prices do not reflect payments that load already makes and the revenues sellers already receive via the resource adequacy mechanisms that are not operated by the Midwest ISO.

308. Indianapolis P&L further argues that while the Midwest ISO may be working on a more comprehensive approach to resource adequacy for a future filing, it is not accurate to conclude that suppliers are not receiving compensation through existing programs as numerous entities in the Midwest ISO footprint must already procure capacity to meet planning reserve margins. Midwest Transmission Customers contend that if a planning reserve standard is adopted, it is only reasonable to assume that customers will be asked to underwrite the costs of maintaining required planning reserves.

¹¹² *E.g.*, OMS, Midwest Transmission Customers, Midwest TDUs, and Indianapolis P&L.

309. Midwest TDUs argue that by ignoring other sources of fixed-cost recovery, the clearing price set under the VOLL-based demand curves will be excessive and will send too strong of a signal for entry, which is inefficient and produces rates that are supra-competitive and therefore unjust and unreasonable. Midwest Transmission Customers argue that while the Midwest ISO's specific scarcity pricing proposal might have had merit in the context of an energy-only market structure, it does not have merit if a mandatory planning reserve standard, as the Midwest ISO now contemplates, will exist. Midwest TDUs, the OMS and Midwest Transmission Customers argue that the VOLL should thus be reduced to reflect these other sources of resource adequacy.

310. Midwest Transmission Customers conclude that it is questionable whether it is equitable to subject customers to scarcity pricing or whether shortage costs should actually be allocated to generators. They argue that given the Midwest ISO's intention to incorporate regional planning reserve requirements into its tariff by the end of 2007,¹¹³ the Commission should not accept the Midwest ISO's scarcity pricing proposal and should address scarcity pricing, if at all, through the long-term resource adequacy proposal.

311. The OMS requests that the Commission and the Midwest ISO consider the development of the Midwest ISO's markets as ongoing and subject to further changes. The OMS urges the Commission to direct the Midwest ISO to work with stakeholders on all of the inputs to the demand curve by considering changes in offer caps and any other changes toward revising the demand curves to provide the proper financial incentives.

b. Answers

312. The Midwest ISO responds that it will take all comments into consideration as it develops its long-term resource adequacy filing to be submitted to the Commission in December 2007.¹¹⁴ The Midwest ISO, however, argues that the Commission properly recognized in the Guidance Order that the ASM and the long-term resource adequacy plan are two separate, albeit related, features and that the justness and reasonableness of the ASM proposal can be evaluated independently of the long-term resource adequacy filing. As such, the Midwest ISO contends that it is not necessary that it establish in this filing that the prices and demand curves used to provide the proper incentives for short-term reliability will also provide the proper incentives for longer-term resource adequacy. The Midwest ISO also recognizes that the correct financial incentives, both short- and long-term, must be established and integrated such that sufficient quantities of reserves of all types are available to the system operator at all times, and it clarifies that it is currently

¹¹³ See Midwest ISO December 28, 2007 Filing, Docket No. ER08-394-000.

¹¹⁴ *Id.*

working with stakeholders to finalize its long-term resource adequacy plan. The Midwest ISO explains that its long-term resource adequacy plan includes the elements necessary to provide the proper financial incentives for long-term resource adequacy. As part of that process, and in conjunction with its ongoing evaluation of ASM design issues, the Midwest ISO states that it will work with its stakeholders to ensure that its short-term and long-term financial incentives are properly integrated including, but not limited to, VOLL, demand curves and scarcity pricing.

c. Commission Determination

313. As noted above, several market participants argue that any scarcity pricing mechanism either would be best considered as a package with the long-term resource adequacy proposal or should be reexamined in light of the resource adequacy provisions to ensure that the values used in setting the scarcity pricing provide proper price signals to ensure both short-term reliability and long-term resource adequacy given any additional payments made from other markets (i.e., capacity markets). The Commission recognizes these concerns and agrees that both the Midwest ISO and the Commission should examine whether the combination of the scarcity pricing, with the associated demand curve values, and other resource adequacy provisions send a proper long-term signal as these other market design features are developed. However, we conclude that the scarcity pricing provisions are an important feature in implementing the Midwest ISO's ASM, are a significant step forward in the development of competitive wholesale electricity markets, and are consistent with the Midwest ISO's current market design and resource adequacy provisions. In the context of a complete capacity market proposal, the Commission would also be able to address Midwest TDU's contentions that it should be the generators serving as capacity resources that were not available during the periods of scarcity that should be responsible for paying the scarcity prices. The scarcity pricing provisions presented by the Midwest ISO stand on their own merits as an important feature to ensure short-term reliability in the Midwest ISO's ASM and thus we will not delay the implementation of the scarcity mechanisms to coincide with the ongoing resource adequacy proceeding.

314. We disagree with Indianapolis P&L that the demand curves and scarcity pricing provisions will not provide an incentive for new construction, contracting, or demand response. Being able to see the proper price signals in all hours, especially during periods of scarcity, will allow loads to contract with generators and DRRs to mitigate the risk and to avoid the associated scarcity prices. Furthermore, loads will not have the incentive to invest in technologies to become DRRs in the market both as capacity and energy resources, thus avoiding paying scarcity prices, and as a resource capable of providing ancillary services, as discussed in this order. We reiterate, however, that the purpose of scarcity pricing in the context of the ASM is to provide appropriate price

signals for resources bidding in to the reserve markets, and thereby ensure short-term reliability. Incentives to build or develop new resources are best addressed in the resource adequacy proceeding.

315. Several market participants argue that having a \$3,500/MWh scarcity price paid for energy and a separate capacity payment would constitute a double payment. We recognize that the value (and price) of capacity will depend on the opportunity costs of providing the capacity to the market. If the capacity provided by a generator or demand resource is an agreement to sell energy for \$3,500/MWh, we would anticipate that the price of capacity would be much lower than if the resource was then required to sell energy for \$1,000/MWh. If the price paid for capacity remained high even with a \$3,500/MWh scarcity price associated with the VOLL, we would expect that available resources would quickly enter the market, since the foregone opportunity costs of selling capacity to an entity in the Midwest ISO would be low.¹¹⁵ In particular, we would expect that loads would have a strong incentive to invest in the technologies needed to be capacity resources if the price for capacity in the Midwest ISO remained high, especially since this would mean that the loads could also avoid paying the \$3,500 scarcity price during shortage periods. If, in the future, the Midwest ISO develops a different capacity construct, such as those used in ISO-New England and PJM, we agree that the Commission should re-examine the use of scarcity pricing to ensure that loads are not double-paying for capacity and that proper price signals remain for both short-term reliability and long-term resource adequacy.

316. Additionally, we conclude the proposal approved herein provides market participants an adequate opportunity to prevent the market from going into reserve shortage conditions and to hedge themselves against high scarcity prices. As described in its filing, the Midwest ISO has worked to expand opportunities for demand response and has established a platform for demand response resources to participate in the energy and ancillary services markets.¹¹⁶ Also, the Midwest ISO's ASM will provide a centralized mechanism for load serving entities to contract with generators to provide energy and ancillary services to the market. Furthermore, the introduction of a centralized, co-optimized market to procure operating reserves and energy should allow for a better use of current resources and lessen the amount of total reserves needed when compared with each balancing area procuring reserves separately. Finally, as Richard Doying explains

¹¹⁵ We agree with Midwest Transmission Customers, however, that given the Midwest ISO's current market design and capacity requirements, without a change to the resource adequacy requirements this would in effect result in a market design that resembled an energy-only market construct.

¹¹⁶ Midwest ISO Proposal at 5, 35.

in his testimony in the Midwest ISO resource adequacy proceeding, because of historical circumstances, such as the focus of state commissions to ensure that they have adequate resources to meet their loads, “the Midwest ISO currently has adequate Planning Resources and is expected to continue to have adequate Planning Resources for years 2008-2009, 2009-2010 and beyond.”¹¹⁷ Mr. Doying states that “this situation will provide the Midwest ISO with ‘breathing space’” for developing long-term resource adequacy.¹¹⁸ As such, under the proposal adopted herein, LSEs have sufficient time to ensure that they have adequate resources and therefore would reduce the likelihood they would face scarcity pricing in the Midwest ISO market.

K. Self-Scheduling and Self-Supply

1. Midwest ISO Proposal

317. The Midwest ISO proposal includes provisions for the self-scheduling of operating reserves in the day-ahead and real-time markets. The provisions specify scheduling procedures and criteria for acceptance of self-schedules. The Midwest ISO also clarifies that it may reduce self-schedules as necessary to manage transmission constraints, maintain operating reserve requirements, satisfy energy demand, and/or maintain reliable conditions. The Midwest ISO further clarifies that in no case will it accept a self-schedule that violates the operating limits or ramping capabilities of a resource.

2. Comments

318. Indianapolis P&L argues that the Midwest ISO self-schedule provisions are not equivalent to self-provision. It asserts that self-schedulers are price takers that are subject to congestion and losses. In contrast, it asserts, self-provision provides the state-regulated utility with the ability to continue to reliably serve its customers by opting out of the ASM and thereby protecting itself from price exposure and socialized uplift charges.¹¹⁹ Indianapolis P&L also claims that the Midwest ISO proposal violates Commission precedent¹²⁰ and cost causation principles because of the potential mismatch

¹¹⁷ Midwest ISO Dec. 28, 2007 Transmittal Letter, Richard Doying Aff., Docket No. ER08-394-000, at P 24-26.

¹¹⁸ *Id.*

¹¹⁹ Indianapolis P&L claims that the Commission has approved provisions that allow entities to opt-out of the market in the CAISO.

¹²⁰ Indianapolis P&L cites *Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities and Recovery of*
(continued...)

between the amounts charged to LSEs for the amount of ancillary services they are required to obtain and the payments made to these same entities for the amounts they self-schedule.

319. The Michigan Power Agencies argue that removing the ability to self-supply regulating and contingency reserves is not superior to the pro-forma OATT terms and conditions, and they assert that if the self-supply capability is unavailable, then their loads will be subjected to the payment of unknown and potentially volatile market clearing prices for reserves.

320. Indianapolis P&L contends that if the Commission accepts the Midwest ISO self-scheduling proposal, it must require additional modifications to ensure that it places customers in the same financial position as supplying ancillary services on its own behalf. Therefore, according to Indianapolis P&L, an entity that fully meets its ancillary service obligation should not be exposed to costs that result from the actions of other parties and there should be no exposure to scarcity prices or any other form of uplift cost if the party has met its obligation without contributing to any shortfall.

321. Alcoa objects to the statement in the revised tariff provisions that bilateral transactions for operating reserves are not supported by the Midwest ISO's settlement system. Alcoa interprets this statement to mean that the settlement system does not permit bilateral transactions for the supply of operating reserves. Alcoa considers such an exclusion to be contrary to the OATT approved by the Commission that provides for third-party supply of ancillary services such as reserves.

322. Xcel states that it is not clear how a market participant may make alternative arrangements to satisfy its operating reserve obligations, noting that absent such provisions, market participants will always have the obligation to purchase reserves from the Midwest ISO.

3. Answers

323. While acknowledging that other ISOs permit the self-supply of certain ancillary services, the Midwest ISO maintains that the concept of self-supply should not permit an entity to opt-out of the ASM and that, as the Balancing Authority, the Midwest ISO is responsible for ensuring compliance with applicable Electric Reliability Organization

Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, FERC Stats. & Regs. ¶ 31,036, at 31,717 (1996) (“Transmission providers are required to facilitate efforts by customers to meet operating reserve obligations with their own generating resources. . . .”), and *N.Y. Indep. Sys. Operator Corp.*, 97 FERC ¶ 61,155, at 61,677 (2001).

(ERO) standards relating to operating reserves and for procuring such operating reserves on behalf of market participants. The Midwest ISO asserts that its self-scheduling option is consistent with or superior to any provision of self-supply that could be considered an alternative comparable arrangement. The Midwest ISO states that the self-schedule option may enhance the customer's financial position, thus providing a hedge that is superior to a full hedge. Responding to Indianapolis P&L's statements that self-scheduling entities are subject to congestion and losses, the Midwest ISO explains that self-schedules for operating reserves have no impact on congestion and losses. In response to Xcel, the Midwest ISO states that it will review requests for alternative comparable arrangements on a case-by-case basis and notes that it must have dispatch control over resources providing operating reserves.

4. Commission Determination

324. We find that the self-schedule option in the Midwest ISO proposal is just and reasonable. As the Midwest ISO explains, self-scheduling allows market participants to make bilateral contracts and there is no requirement for the payment of congestion and losses, and therefore the option provides all the features of self-supply. We do not consider it appropriate to exempt self-scheduling entities from the costs of the ASM since the management of ancillary services by the Midwest ISO provides reliability benefits for all market participants, including self-scheduling entities. We recognize Indianapolis P&L's concern that a more refined cost allocation may be appropriate since self-scheduling entities can reduce the amount of operating reserves that the Midwest ISO must procure, and we therefore encourage the Midwest ISO to explore these refinements to its cost allocation methodology in stakeholder discussions.

325. The Michigan Power Agencies and Alcoa misinterpret the Midwest ISO's proposed tariff with respect to self-supply. The relevant provisions state that market participants have the ability to engage in bilateral transactions for energy and the option to self-schedule energy and/or operating reserves. The provisions cited by Michigan Power Agencies do not eliminate the self-supply option as they allege, but instead state that a load serving entity must either purchase the reserve services from the Midwest ISO Balancing Authority or make alternative comparable arrangements.¹²¹ Therefore, bilateral transactions remain an option. The provision cited by Alcoa only refers to the settlement of these transactions, meaning that the Midwest ISO will not be tracking the prices and volumes of such transactions. This practice is reasonable because only the parties to the bilateral transactions know the terms of their arrangements, and this practice does not hinder market participants in engaging in bilateral transactions.

¹²¹ Proposed Third Revised Sheet No. 858.

L. Demand Response Resource Issues

326. The Midwest ISO proposes to classify DRRs into two broad types: DRR-I and DRR-II. A DRR-I can only provide two outputs: zero and the targeted demand reduction. The targeted demand reduction represents the projected average demand of the interruptible load for the operating hour. A DRR-I is eligible to provide energy and contingency reserves in the day-ahead, RAC, and real-time markets. However, a DRR-I is similar to a block-loaded generation resource because it cannot respond to set-point instructions, and therefore, is not eligible to provide regulating reserves. DRRs-I are further sub-divided into emergency and non-emergency DRR-I. As the name implies, an emergency-only DRR-I is only deployable when the Midwest ISO issues an emergency alert. All other DRR-I resources are available to be deployed in both emergencies and non-emergencies.

327. In contrast, a DRR-II represents a combination of controllable load and behind-the-meter generation that is similar to any other generation resource. Provided it is otherwise qualified, a DRR-II can provide energy, regulating and contingency reserves, in all markets. A DRR-II can elect to make itself available only during emergencies, only during non-emergencies, or during both emergencies and non-emergencies. DRR-II is dispatchable and may be self-scheduled. Compensation for DRRs-II is the same as it is for generation resources.

328. The Midwest ISO intends to address incentives and performance standards for DRRs during emergencies in other proceedings.¹²² The Midwest ISO has already proposed incentives for DRRs to perform in emergency situations,¹²³ and penalties for DRRs that fail to perform in emergencies¹²⁴ in proceedings pending before the Commission. The Commission will address these DRR issues in their respective proceedings instead of in the instant proceeding.

¹²² In the Guidance Order, the Commission encouraged the Midwest ISO to submit a plan for measuring and verifying demand resources and to consider comparable requirements for demand resources and generation resources, including possible penalties for deviations from deployment instructions, performance audits, and rules for delisting demand resources that do not respond to deployment instructions.

¹²³ On December 31, 2007, the Midwest ISO made a filing on emergency demand response. Midwest ISO December 31, 2007 Filing, Docket No. ER08-404-000. That filing addresses demand response incentives.

¹²⁴ On December 28, 2007, the Midwest ISO made its resource adequacy plan filing. Midwest ISO December 28, 2007 Filing, Docket No. ER08-394-000. That filing proposes penalties for DRRs that do not perform in emergencies.

1. Host Load Zone Dispatch Interval Demand Forecast

a. Midwest ISO Proposal

329. The Midwest ISO proposal includes tariff provisions requiring the submittal of a five-minute dispatch interval demand forecast for the host load zone of each DRR-I and DRR-II for each dispatch interval in an hour in which the resource is committed. The proposal provides that the forecast be submitted no later than five minutes prior to the beginning of the dispatch interval. The proposed provisions also specify that no five-minute dispatch interval demand forecast for the host load zone can exceed one-twelfth of the highest demand recorded for that host load zone. The highest demand recorded is obtained from the most recent commercial model update based on state estimator data and the elemental pricing node percent of load factors.

b. Comments

330. Alcoa considers the requirement for continuous five-minute forecasts for DRRs to be burdensome and to create a financially binding commitment. Alcoa contends that this provision is not required for reliability purposes.

331. Ameren considers the dispatch interval forecast limitation to one-twelfth of the highest demand to be practically impossible because the most recent commercial model update may have been made during low load periods. Ameren recommends that the limitation be a multiplier of the commercial zone's expected load to recognize weather impacts. Ameren also requests that there be the ability to update the estimate if there is a known increase in the zone's load. Midwest Transmission Customers argue this restriction would foreclose any load growth that occurs within a DRR from participating in the market until after the next commercial model update.

c. Answers

332. The Midwest ISO explains that it is proposing a five-minute load forecast in lieu of a customer submitted historical or forecast baseline to increase the accuracy of performance monitoring and provide more flexibility to market participants. The Midwest ISO notes that market participants may elect to supply static forecast data, in five-minute or hourly intervals, in lieu of five-minute dynamic forecasts for DRRs-I.

d. Commission Determination

333. We agree with the Midwest ISO that forecasts of demand provide a more up-to-date and accurate basis for determining demand compared to estimates derived from historical data. Forecasting allows for better performance monitoring. Since demand response is a type of resource, we consider it reasonable that the Midwest ISO require dispatch forecasts, and note that the Midwest ISO is being responsive to market

participant concerns by agreeing to accept a variety of data from market participants.¹²⁵ With respect to the limitation on five-minute forecasts to one-twelfth of the highest demand, we do not understand the need for such a limitation and we note that the limitation defeats the purpose of an up-to-date forecast with historical, and therefore potentially irrelevant, data. For this reason, we require the Midwest ISO to explain the purpose of this provision in a compliance filing to be submitted within 30 days of the date of this order.

2. Settlement of Demand Response Resources

a. Background

334. The Midwest ISO explains that DRRs-I will be compensated based on the sum of the dispatch interval demand forecasts for the host load zone minus the actual metered demand of the host load zone over the hour. The Midwest ISO notes that this amount may differ from the targeted demand reduction level. The Midwest ISO also states that the host load zone is settled based on the actual energy withdrawal, or the sum of the dispatch interval demand forecasts for any host load zone when a DRR-I is committed for energy or deploys contingency reserve. The Midwest ISO explains that this method does not provide a double payment to the DRR- I, explaining that if the host load zone was settled based on actual metered load, the host load would also receive a payment equal to the reduction in consumption multiplied by the locational marginal price.¹²⁶

b. Comments

335. Midwest Transmission Customers assert that the Midwest ISO proposal fails to provide equitable treatment for demand resources and will not expand demand response opportunities. Midwest Transmission Customers claim that the Midwest ISO will charge the load its actual metered energy consumption plus the additional energy consumption that would have existed had the customer not interrupted its load, and will compensate the DRR-I for the amount of its targeted load reduction, so that the customer's net energy-related compensation for its load reduction is zero. They state that this would limit net compensation to the hourly curtailment offer plus shutdown costs for interruptible loads curtailing usage.

336. Midwest Transmission Customers further argue that the Midwest ISO proposal will require a much higher offsetting payment (through shutdown and hourly curtailment

¹²⁵ We note that the dispatch forecasting requirements are tariff requirements and therefore we see no need to add these provisions as Alcoa recommends.

¹²⁶ Roy Jones Test. at 66-68.

offers) in order for demand resources to be willing to participate in the market since the customer is being forced to purchase and resell the energy being made available in the form of demand response. Midwest Transmission Customers state that higher-than-necessary marginal prices will result because lower cost demand bids will no longer be available. They further assert that artificial scarcity will occur since the Midwest ISO treats the load reduction as additional demand and deploying the demand resource would not result in re-establishment of contingency reserves. Midwest Transmission Customers conclude by stating that the proposal is inequitable because it subjects demand resources to duplicate charges, since the actual withdrawal of energy provides the basis for liability for RSG charges and charges under Schedules 3, 5 and 6.

c. Answers

337. The Midwest ISO responds that under its proposal load will not pay for energy that is not consumed, contrary to Midwest Transmission Customers' allegation that the customer's net energy-related compensation for its load reduction is zero. The Midwest ISO believes that gross load settlement¹²⁷ appropriately compensates and induces DRRs without imposing additional uplift costs on other market participants. The Midwest ISO provides an illustrative scenario that shows all load benefits from the DRR, but load with the DRR benefits more under the gross load settlement mechanism, whereas load without the DRR pays more under the net load settlement mechanism because the benefits to load with DRR is in excess of the savings to the market. The Midwest ISO also provides information showing that other RTOs utilize both the net load and gross load settlement methods.

338. Midwest Transmission Customers, in their answer to the Midwest ISO, provide an additional illustrative scenario that shows that the deployment of DRRs is capable of providing net benefits to all load including load without DRRs. Midwest Transmission Customers assert that the savings to load without DRRs will be positive whenever the value of the locational marginal price reduction to load exceeds the payment to DRRs. Midwest Transmission Customers also argue that the Midwest ISO ignores the impact of its method on DRRs that do not register and therefore the Midwest ISO has to commit generation resources to serve the full forecast load, resulting in uplift costs triggered by RSG payments. They claim the gross load approach provides no upside benefit to counter the additional costs of telemetering, load forecasts and excessive/deficient energy deployment charges.

¹²⁷ Gross load settlement refers to the practice of either not charging load for energy not consumed or paying the DRR for energy that was not consumed. The other settlement method, net load settlement, is the practice of not charging load for energy not consumed and paying the DRR for energy not consumed.

339. Midwest Transmission Customers also argue that the gross load settlement method, by requiring that the customer's entire load to be subject to locational marginal price in order to participate as a DRR, ignores that few customers will purchase load at the locational marginal price in order to participate as a DRR, and instead will take the bundled service from regulated utilities. The result of applying the gross load method, according to Midwest Transmission Customers, would be little or no participation by DRRs. They further note that the gross load method does not accommodate load subject to a financial bilateral contract as a DRR. Midwest Transmission Customers state that the benefits far outweighed the payments to DRRs in PJM, which uses the net settlement method, during the 2007 heat wave. Midwest Transmission Customers conclude with a request for a technical conference.

d. Commission Determination

340. We find that the settlement method proposed by the Midwest ISO is just and reasonable. While Midwest Transmission Customers raise a number of objections to the method, we do not interpret Midwest Transmission Customers' concerns to be that the Midwest ISO method is unreasonable, but rather that the Midwest Transmission Customers' proposed method will arguably provide a greater incentive for participation by DRRs. We do not consider the incentive characteristics of a proposal to be a basis to reject the proposal, assuming that the proposal is otherwise just and reasonable.¹²⁸ Rather, Midwest Transmission Customers should discuss their concerns regarding barriers to demand response participation and the need for incentives in stakeholder discussions. The method proposed by the Midwest ISO is used to settle DRRs in several other ISOs and we have no indication that the operation of that settlement method has resulted in unreasonable outcomes. For these reasons, we accept the Midwest ISO's proposed settlement method and reject the Midwest Transmission Customers' request for a technical conference.

341. However, for administrative ease, we require the Midwest ISO to resubmit the tariff language implementing this approved settlement method in a single section of the tariff in the compliance filing to be submitted within 30 days of the date of this order. We note that the Midwest ISO proposal reduces the RSG credit for revenues received for energy.¹²⁹ However, as the Midwest ISO states in its proposal, a resource providing reserves is not providing energy.¹³⁰ For this reason, we require the Midwest ISO to

¹²⁸ We note that the purported incentive benefit of the Midwest Transmission Customers' method comes at the cost of a higher cost allocation to load without DRRs.

¹²⁹ See Jones Test. at 67

¹³⁰ *Id.* at 58.

reconcile how it will reduce the RSG credit for revenues received *for energy* with its statement that a resource providing reserves *is not* providing energy in the compliance filing to be submitted within 30 days of the date of this order.

3. Demand Response Resource Metering

a. Background

342. The Midwest ISO requires that owners of DRRs-I submit through electronic means the average metered demand consumption of the host load zone on at least a one-minute interval basis on an ongoing basis within any hour that the DRR has been committed for energy or is available to be cleared for contingency reserves. The Midwest ISO explains that it will use this data to determine compliance and these requirements will be included in the Business Practice Manuals.

b. Comments

343. Midwest Transmission Customers and Alcoa assert, respectively, that the Midwest ISO metering requirement will limit the practical ability of demand resources to participate in the Midwest ISO's markets and preclude the participation of smaller manufacturing loads due to the expense meeting the requirements. Midwest Transmission Customers recommend that the Midwest ISO be directed to revise its proposed treatment to accommodate existing metering infrastructure. Alcoa urges the Commission to direct the Midwest ISO to collaborate with industrial customers to develop a more flexible demand response process that reduces barriers to entry. Midwest Transmission Customers further recommend that the metering requirements be identified in the TEMT. Wisconsin Electric asserts that if DRRs-I must be metered and measured, then dispersed DRRs would not be practical. For this reason, Wisconsin Electric recommends a reduction should be assumed for resources that do not submit a dispatch interval demand forecast and the host load should be adjusted by the demand reduction target.

c. Answers

344. The Midwest ISO responds that its one-minute metering requirement is needed to ensure that it can verify that these resources curtail load when committed, deploy contingency reserves when instructed and ensure that these DRRs are held to the same performance standards as other resources. The Midwest ISO disagrees with the Wisconsin Electric recommendation and clarifies that DRRs-I will be settled on a net metered load basis if they do not submit a dispatch interval demand forecast.

d. Commission Determination

345. We consider it reasonable for the Midwest ISO to have the ability to verify the performance of resources, and meters are necessary to monitor performance. We cannot expect the Midwest ISO to manage its ASM efficiently or reliably if it does not know the performance status of resources, including DRRs. At the same time, we are in favor of facilitating the development of DRRs and therefore we encourage the Midwest ISO to discuss more flexible metering requirements with stakeholders. We agree with commenters that the proposed metering requirement is a condition of providing DRRs and therefore should be included in the tariff. We note that the Midwest ISO has agreed to include its metering requirements for DRRs in a compliance filing, and therefore we require that these tariff provisions be included in a compliance filing to be submitted within 30 days of the date of this order.

4. Certification of Demand Response Resources

a. Comment

346. Midwest Transmission Customers claim that the Midwest ISO fails to define any of the criteria it would use to determine eligibility of DRRs to provide either energy or operating reserves. Midwest Transmission Customers state that the Commission should not approve provisions requiring the Midwest ISO to certify DRRs in the absence of Business Practice Manuals that detail the eligibility criteria and how the criteria would be applied. Midwest Transmission Customers further assert that approval of the proposed demand response certification method would vest the Midwest ISO with unfettered discretion and create circumstances in which the Midwest ISO's interpretation could frustrate the Commission's policy goal of facilitating the provision of ancillary services by DRRs.

b. Answers

347. The Midwest ISO responds by explaining that the tariff provisions that specify the criteria for certification of all resources, including DRRs, and the metering and control requirements will be specified in the Business Practice Manuals.

c. Commission Determination

348. While we find that the proposed tariff provisions specify a number of certification requirements, such as telemetry requirements and the ability to respond to hourly demand reduction instructions and to five-minute dispatch targets, we agree with Midwest Transmission Customers that the Midwest ISO should specify for market participants any additional criteria for eligibility as soon as practicable to ensure that demand resources

can fully participate in the ASM. Accordingly, we require the Midwest ISO to identify any additional criteria eligible for inclusion in its tariff in a compliance filing to be submitted within 30 days of the date of this order.

5. Batch Load Demand Response

a. Comment

349. Midwest Transmission Customers assert that the proposed contingency reserve penalty mechanism is unreasonable since it results in virtually all demand resources, except resources operating at a 100 percent load factor, being subject to penalties irrespective of the actual performance of the demand resources. Midwest Transmission Customers argue that demand response customers will always incur penalties unless the reserve deployment request occurs at the precise moment of the lowest ebb in the customer's actual demand. Midwest Transmission Customers recommend that the Commission require the Midwest ISO to modify its provisions for spinning and supplemental contingency reserves to accommodate demand resources that can curtail down to a firm net level, but cannot readily curtail down by a fixed amount of MW.¹³¹ Steel Producers also recommend that the Commission require the Midwest ISO to accommodate batch load DRRs in its contingency reserve markets.

b. Answers

350. The Midwest ISO responds that its proposal accommodates batch load processes since it includes provisions for five-minute demand forecasts for host loads. Therefore, the forecast would recognize that the batch process could be down during one dispatch interval and restored during the next interval, according to the Midwest ISO, and a demand resource would not be penalized even though the batch process load was down at the time the contingency reserve was deployed.

c. Commission Determination

351. We find the Midwest ISO answer to be responsive to the concerns of commenters with regard to batch load resources. Based on the explanation provided by the Midwest ISO, its proposal will remove barriers to the participation of demand resources in reserves markets since the five-minute forecast process will be able to recognize changes in batch loads and thereby avoid assessing contingency deployment penalty charges when loads change.

¹³¹ Midwest Transmission Customers cite to Commission determinations that PJM's methodology for measuring response must accommodate batch load-type resources. See *PJM Interconnection, LLC*, 114 FERC ¶ 61,201 (2006).

6. Demand Resource Scheduling In Whole Megawatts**a. Background**

352. The Midwest ISO's proposal requires that resources, including demand resources, offer in whole MW or MWh quantities.

b. Comment

353. Midwest Transmission Customers assert that this approach creates settlement issues and raises the question of whether the size of a customer's load response capabilities will be used as criteria to declare the customer ineligible. Midwest Transmission Customers note that PJM and the New York ISO allow scheduling of demand resources in 100 kW increments and recommend that the Commission direct the Midwest ISO to modify its tariff to accommodate reasonable scheduling practices, such as 100 kW increments.

c. Answers

354. The Midwest ISO does not object to allowing resources to specify MW and MWh parameters in 0.1 MW and/or 0.1 MWh increments and agrees to modify the tariff accordingly.

d. Commission Determination

355. We find a 0.1 MW and/or 0.1 MWh scheduling parameter to be reasonable and require the Midwest ISO to revise its tariff accordingly in a compliance filing to be submitted within 30 days of the date of this order.

7. Demand Response Resources Available During Shortages**a. Comment**

356. Midwest Transmission Customers state that the commitment of DRRs-I available under non-emergency conditions has been omitted from step one of the steps the Midwest ISO would undertake to alleviate shortage conditions in the day-ahead market.

b. Answers

357. The Midwest ISO responds that these resources would have already been committed prior to the shortage conditions and therefore do not need to be specified in step one.

c. Commission Determination

358. The proposed tariff provisions state that shortage procedures will commence if the maximum non-emergency supply level of all available non-emergency resources cannot satisfy demand bids, exports, system losses and operating reserve requirements. We find that this formulation includes the commitment of non-emergency demand resources, and therefore revisions to the tariff are not required.

8. Applicability of Load Zones To Demand Resources

359. The Midwest ISO proposes that multiple DRRs can be associated with a single host load zone¹³² if the host load zone and all of the DRRs associated with the host load zone are owned by the same asset owner.

a. Comments

360. Midwest Transmission Customers note that DRRs-I are discrete customer loads that are not likely to be owned by the same asset owner. Therefore, DRRs-I would not be able to meet the proposed requirement regarding aggregation, which specifies the host load zone and all of the DRRs-I must be owned by the same asset owner. Midwest Transmission Customers believe the provision is intended to support aggregation of DRRs-I for a host load zone and aggregated DRRs-I that are supplied by a single market participant, and request that the Midwest ISO clarify these provisions accordingly.

b. Commission Determination

361. We recognize that the Midwest Transmission Customers are asking that market participants with host loads take on aggregator functions for entities they do not own. While we encourage market rules that allow the participation of all demand resources, not just those resources owned by LSEs, we will not require host load market participants to take on these roles. To better address the concerns of the Midwest Transmission Customers, we encourage the Midwest ISO to submit a proposal to amend its market rules as necessary to permit aggregators for retail customers to bid demand response on behalf of retail customers directly into the Midwest ISO markets, unless the laws or regulations of the relevant electric retail regulatory authority do not permit a retail customer to participate.

¹³² A host load zone is a separate commercial pricing node that has the same definition, i.e., elemental pricing node, as the DRR.

9. Applicability of Dispatch Interval Demand Forecasts for Demand Response Resources

362. Ameren asserts that there is no check on the accuracy of the forecast associated with DRRs-I and -II, and notes that the accuracy of the forecasts may affect the ability of the Midwest ISO to manage the ASM. Ameren argues that the forecast should therefore be subject to monitoring for negative impacts to the market in the same manner as other resources. We note that the dispatch interval demand forecast is used to derive the actual energy injection and withdrawal for DRRs, and therefore is the basis of settlement. Accordingly, we agree with Ameren that the accuracy of this forecast is necessary to both manage the ASM and ensure that settlement is based on accurate information. For this reason, we require the Midwest ISO to propose provisions to measure the accuracy of dispatch interval demand forecasts for LSEs and DRRs and provisions to ensure the submission of accurate forecasts in a compliance filing to be submitted within 30 days of the date of this order.

10. Participation of Demand Response Resources and New Technologies in the ASM

a. Midwest ISO Proposal

363. The Midwest ISO proposal requires that regulating and operating reserves supply reserves for a minimum continuous duration of 60 minutes. The Midwest ISO explains that regulating reserves must be capable of supplying regulation for a minimum continuous duration of 60 minutes to accommodate design and operational restrictions that may prohibit generation resources from cycling regulation control system statuses and will allow the Midwest ISO to effectively manage the Midwest ISO Balancing Authority ACE to comply with the Applicable Reliability Standards.¹³³

b. Comments

364. Alcoa faults the Midwest ISO proposal for prohibiting aluminum smelters from participating as spinning reserves since their production processes cannot meet the minimum continuous duration requirement of 60 minutes and the requirement for automatic restoration of curtailed power is unsafe and results in environmental non-compliance. Beacon Resources objects that the Midwest ISO proposal does not permit the use of fly-wheel technologies as regulating reserves and includes provisions such as the 60-minute continuous duration requirement and registration requirements that these technologies cannot meet and therefore foreclose their participation in regulation markets. Beacon Resources further asserts that co-optimization precludes regulation-only

¹³³ See Roy Jones Test. at 47.

providers from participating in regulation markets. Beacon Resources explains that in the Midwest ISO market using co-optimization resources bidding in to provide regulation can be called to instead provide contingency reserves or energy. Beacon Resources states that since its resource cannot provide that type of capacity it would be subject to penalties when called upon to provide these reserves. Beacon therefore recommends that the Commission evaluate whether it would be beneficial to unbundled ASM services or allow resources to be exempt from co-optimization and procured separately. The Midwest ISO indicates that it is committed to working with Beacon Power to develop amendments to the ASM proposal.

c. Commission Determination

365. While we understand the need to tailor requirements to maximize participation by generation resources, we also want to ensure that all resources receive comparable treatment. For this reason, we require the Midwest ISO to evaluate, through stakeholder discussions,¹³⁴ adjustments to operating requirements and ASM procedures that will remove barriers to comparable treatment of DRRs and new technologies in the regulating reserve markets and to provide a report on its efforts to incorporate these resources into its markets within 60 days of the date of this order. We also require the Midwest ISO to submit revised tariff sheets, if adjustments are proposed, in a compliance filing to be submitted concurrently with the 60-day informational filing.

M. Dynamic Scheduling and Pseudo-Ties

1. Midwest ISO Proposal

366. The Guidance Order did not address dynamic scheduling and pseudo-ties. In section 38.2.5 of its proposed tariff, the Midwest ISO proposes to remove the provisions of the existing TEMT that allow for the dynamic scheduling of jointly-owned units (JOU's). Midwest ISO states that the dynamic scheduling option under the existing TEMT is not feasible under the proposed ASM design because dynamically scheduled JOU's cannot be properly priced.¹³⁵ The Midwest ISO proposes that market participants replace the dynamic scheduling provisions with the option to pseudo-tie their portion of the JOU so that each market participant has its own metered value for line flows.

¹³⁴ We consider discussions between the Midwest ISO and Beacon Power to be the most appropriate venue for determining whether new technologies qualify as generation resources.

¹³⁵ Midwest ISO Proposal at 49, Att. E, Roy Jones Test. at 35-36.

2. Comments

367. Consumers Energy strongly supports the Midwest ISO's proposal to replace the dynamic scheduling provisions contained in section 38.2.5 of the Midwest ISO's tariff with the option to either pseudo-tie or coordinate the submission of data, contingent upon the Commission's requiring the Midwest ISO to (1) allow each owner to elect an option irrespective of the option chosen by the other owners, (2) allow generation owners to make their decisions on whether to pseudo-tie or coordinate with other owners on a unit-by-unit basis, not on a portfolio basis, and (3) improve or maintain the modeling of the Ludington Plant.¹³⁶

368. Michigan Power Agencies claim that the Midwest ISO has not provided them with the information necessary to evaluate either the economic or operational impact of moving from dynamic scheduling to pseudo-ties and therefore, they request that the Commission reject the Midwest ISO's proposal to eliminate dynamic scheduling for JOUs, or, alternatively, set the issue of JOU scheduling for settlement judge procedures.

369. Ameren notes that coordinating the dispatch of a JOU that is offering both energy and ancillary services, and ensuring that capacity cleared for contingency reserve for one owner remains undischarged for a co-owner, can be extremely complicated. Ameren requests that the Midwest ISO provide details in the proposed tariff or commit to providing details in its Business Practice Manuals that fully describe how it will manage these resources to ensure system reliability.

370. Duke expresses concern that changes to the definition of "Generation Resource" may unintentionally significantly limit the conditions under which a unit outside of the Midwest ISO may be used as a Network Resource or to satisfy Module E requirements. Duke asserts that the Midwest ISO should clarify that the language of TEMT Section 1.121, defining Generation Resource, does not require all generating facilities located outside of the Midwest ISO to be pseudo-tied into the Midwest ISO to be eligible to be Network Resources under Module E, Resource Adequacy. Duke also expresses concern that the ASM proposal is an "all or nothing" approach in regard to participation of units

¹³⁶ According to Consumers Energy, the Midwest ISO's filing is ambiguous as to whether each owner of a JOU will be allowed to continue to have a separate CPNode for each unit. The necessity for the continuation of 12 CPNodes is based on the Ludington Plant's unique ownership. Consumers Energy owns 51 percent of the Ludington Plant and serves as its operator, while Detroit Edison owns 49 percent of the Ludington Plant. According to Consumers Energy, there is no reason that at a minimum each owner should not receive a CPNode for each unit as it does now.

outside of the Midwest ISO. It asserts that the Midwest ISO tariff should be amended to allow market participants to elect which portion of a unit outside of the Midwest ISO they will commit to provide ancillary services to via a pseudo-tie.

371. Duke also requests that the language in section 39.2.3, “into the Midwest Balancing Authority,” be changed to “into the Midwest ISO Balancing Authority Area.” Duke also requests verification that such Load, as part of the “Transmission Provider Region,” would be part of the “Midwest ISO Balancing Authority Area” as that term is defined in TEMT section 1.198b, and thus would be subject to the operation of the Midwest ISO Balancing Authority pursuant to TEMT section 1.198a.

372. ITC & METC also comment on section 38.2.5(f) of the proposed tariff, which allows the sale of operating reserves from resources located in Canada through pseudo-tied external resources or from external asynchronous resources. ITC & METC have direct tie lines to Canada and under the Midwest ISO proposal will be a Local Balancing Authority. For purposes of transmission system reliability, ITC & METC urge that the proposed tariff be amended to provide that all flow and schedule data of resources that sell operating reserves into the Midwest ISO market must also be provided to Local Balancing Authorities. They state that such information is needed by LBAs with direct ties to Canada to monitor properly all flows over that interconnection. ITC & METC also comment on section 33.8.4 of the proposed tariff, regarding notifications of manual dispatch instructions to Balancing Authorities and market participants but not to Local Balancing Authorities. ITC & METC request that the Commission require that Local Balancing Authorities also be notified of manual dispatch instructions.

373. Midwest TDUs object to the disparate treatment of external resources participating in the ASM.¹³⁷ Midwest TDUs further contends that requiring a pseudo-tie can sometimes impose a significant burden and market friction. Midwest TDUs argue that, absent a reliability-based reason to require a pseudo-tie, the Midwest ISO should give synchronous external resources the same flexible rights that it gives to asynchronous external resources. According to Midwest TDUs, doing so will expand the number of eligible sources and should thereby increase competition, to the benefit of consumers.

¹³⁷ External resources that are synchronized cannot offer operating reserves into the Midwest ISO ASM unless they are pseudo-tied into the Midwest ISO control area. In contrast, “External Asynchronous Resources,” i.e., External Resources that are either located outside the Eastern Interconnection or broken out from the Eastern Interconnection as an asynchronous island connected through D.C. ties, are eligible if they are “capable of receiving and responding to Dispatch Target and Setpoint Instructions from the Midwest ISO.” Midwest TDUs Comments at 13-14 (citing Jones Test. at 73).

374. Otter Tail requests that the Commission clarify why the generators of non-Midwest ISO entities, such as Minnkota, would be considered internal to the Midwest ISO, particularly given the specific exclusion of Minnkota's generation, transmission, and load from the Midwest ISO energy market and the cost associated with the market.

375. WAPA notes that it is presently a Balancing Authority for a Midwest ISO member, Montana-Dakota Utilities (MDU). WAPA states that it did not agree to have the pseudo control area designation result in WAPA's Balancing Authority becoming a Midwest ISO Balancing Authority. WAPA is unclear how the Midwest ISO could include MDU within the Midwest ISO Balancing Authority. WAPA states that it has recently become aware that MDU is pursuing the creation of its own Balancing Authority and would be splitting off from WAPA. It further states that if MDU creates its own Balancing Authority prior to the approval and start of the Midwest ISO's ASM, then WAPA would have no concerns. But, if MDU does not create its own Balancing Authority, then WAPA has concerns about the effects the Midwest ISO's proposal would have on WAPA's Balancing Authority, and WAPA would oppose the approach.

376. Acciona Wind notes that the existing Midwest ISO tariff does not address how an external resource can be pseudo-tied into an existing Balancing Authority within the Midwest ISO or to the Midwest ISO itself once the Midwest ISO becomes a balancing authority. Therefore, Acciona Wind asserts that the Midwest ISO should either clarify that the Tatanka Wind Farm project,¹³⁸ and other similarly-situated generators will have the option of pseudo-tying into the Midwest ISO and designating the Midwest ISO to act as their Balancing Authority under the proposed tariff or alternatively, amend the proposed tariff to expressly provide that option.

3. Answers

377. In its answer to the Michigan Power Agencies, the Midwest ISO states that a scheduling option for JOUs will continue as implemented under the current energy market until the ASM Proposal is implemented

378. In its response to Acciona Wind, the Midwest ISO states that pseudo-ties are only applicable to external resources. To the extent that Acciona Wind is within the metered boundaries of the Midwest ISO Balancing Authority Area, there is no need for Acciona Wind to pseudo-tie. Acciona Wind will be treated as any other market participant with Generation Resources or Intermittent Resources.

¹³⁸ That project is located in Dickey and McIntosh Counties, North Dakota and McPherson County, South Dakota.

4. Commission Determination

379. With regard to the dynamic scheduling issues raised by Michigan Power Agencies and Consumers Energy, the Midwest ISO's brief explanation of the reasons for its proposal has not resolved the concerns of these parties, and the Midwest ISO has not provided sufficient information on the implications of eliminating dynamic scheduling to make a reasoned determination. The Midwest ISO should pursue this issue further with stakeholders. For this reason, we reject those proposed tariff provisions relating to JOUs without prejudice to the filing of a revised FPA section 205 proposal based on stakeholder discussions.

380. With regard to Ameren's concern regarding the dispatch of JOUs, we find that the Midwest ISO's response to provide operational and modeling details for JOUs in its Business Practice Manuals satisfactorily resolves that concern.

381. We direct the Midwest ISO, in a compliance filing to be submitted within 30 days of this order, to address Duke's concern regarding the TEMT section 1.121 definition of "Generation Resource" and explain how an external network resource will be treated. We agree with Duke that the Midwest ISO should replace the term "Midwest Balancing Authority" with the term "Midwest ISO Balancing Authority Area" in section 39.2.3 of the TEMT. We also require the Midwest ISO to address Duke's concern that the inclusion of such load under TEMT section 39.2.3 would also be part of the Midwest ISO Balancing Authority Area as defined in TEMT section 1.198b.

382. We agree with ITC & METC's concerns regarding flow and schedule data for resources and manual dispatch signal instructions, and we require the Midwest ISO to clarify how its ASM design will handle those concerns in a compliance filing to be submitted within 30 days of the date of this order.

383. We require the Midwest ISO to address Otter Tail's concern regarding how Minnkota would be considered internal to the Midwest ISO. We also require the Midwest ISO to clarify for WAPA the status of MDU as a Balancing Authority. We require both clarifications to be included in a compliance filing to be submitted within 30 days of the date of this order.

384. We find that the Midwest ISO's answer to Acciona Wind, stating that Acciona Wind's facility will not be pseudo-tied because it is within the metered boundaries of the Midwest ISO, is responsive to Acciona Wind's concerns. We emphasize that such treatment must be available to other similarly-situated resources.

N. Cost Allocation

1. Midwest ISO Proposal

385. The Midwest ISO proposes to collect charges associated with procurement costs for regulating reserve, spinning reserve and supplemental reserve, respectively, from market participants under Schedules 3, 5 and 6. Regulating reserve procurement rates in Schedule 3 are applied to LSE load, including load served through both grandfathered agreements and carved-out grandfathered agreements. Export schedules are not subject to regulating reserve procurement charges. Spinning reserve and supplemental reserve contingency reserve procurement charges in Schedules 5 and 6 are applied to LSE load, including load served through grandfathered agreements, and to exporting entities and export schedules. The Midwest ISO proposes to allocate costs to load based upon real-time energy withdrawals.

386. The Midwest ISO proposes to allocate costs of regulating and operating reserves via two rates in Schedules 3, 5 and 6. The first rate, the locally-allocated rate, is derived by multiplying the lesser of the zone's obligation¹³⁹ or the zone's specific reserve requirement times the zone market clearing price and dividing this product by zonal load. The second rate, the allocated exchange zonal rate, is derived by multiplying the allocated exchange reserve¹⁴⁰ times the exchange reserve price¹⁴¹ and dividing this product by zonal load. The Midwest ISO explains that its proposal allocates costs among

¹³⁹ Each reserve zone has an obligation equal to the product of the market wide reserve requirement times the zone's load share of market wide load. Reserve zones represent resources and loads within defined geographic sub-regions of the Midwest ISO. The Midwest ISO configures each reserve zone to ensure the minimum required operating reserve is identified within the zone to meet its reliability requirements and the clearing of operating reserves is dispersed throughout the Midwest ISO Balancing Authority Area in accordance with Good Utility Practice.

¹⁴⁰ Exchange reserve is reserve that clears in one reserve zone but is allocated to load within a different reserve zone. The allocated exchange reserve is the reserve obligation for the reserve zone less cleared reserve for the reserve zone, but not less than zero.

¹⁴¹ The exchange reserve price is the sum of the products of the exchange reserves supplied by all reserve zones and the day-ahead weighted reserve MCP for all zones divided by the sum of the exchange reserves for all zones.

reserve zones so that all market participants pay at least their load ratio share of costs and the proposal recognizes the benefits provided by reserves in high reserve requirement zones, or constrained zones, to other zones.¹⁴²

387. The Midwest ISO explains that this allocation is referred to as a hybrid allocation since costs are allocated using both market-wide and zonal allocators. The Midwest ISO proposal is considered to be a modified hybrid method since it does not require high reserve requirement zones, or constrained zones, to share in any of the additional costs that result from providing additional reserves for these zones whereas the original hybrid proposal shared the uplift among all zones. Both methods received stakeholder support.

2. Cost Allocation Based On Energy Usage Versus Demand-Based Cost Allocation

a. Comments

388. Midwest Transmission Customers fault the Midwest ISO proposal for allocating costs based on energy usage when a significant portion of ancillary services costs are capacity costs associated with resources standing ready to serve. They contend that since the availability payment and opportunity costs payments to resources providing reserves are not payments for energy but rather are payments for standing ready in case a reserve event occurs, they represent a reservation fee associated with holding capacity out of the energy market, similar to the capacity charges currently effective in Schedules 3, 5 and 6. According to Midwest Transmission Customers, cost-causation principles require that such costs should be allocated per a demand-based methodology, not an energy-based methodology.

389. Midwest Transmission Customers assert that the proposal will cause significant cost shifts since it is different from the current methodology, and the shifts will result in more regulation and reserve costs allocated to higher load factor market participants. Midwest Transmission Customers fault the Midwest ISO for providing no evidentiary support for such substantial shifts in cost allocation.

¹⁴² To ensure reliability, the Midwest ISO must procure additional reserves within the constrained zone at the higher MCP of the constrained zone, since transmission constraints limit access to reserves outside of the constrained zone. These additional reserves in the constrained zone can meet reserve needs outside the constrained zone since there are no transmission constraints to loads outside the constrained zone.

b. Answers

390. The Midwest ISO responds that peak demand is not a determinant of the amount of operating reserve that must be maintained and, instead, reserve requirements will be based on projected hourly demand, change in demand, the degree to which the Midwest ISO is complying with ERO standards and, in the case of contingency reserves, the loss of the largest resource or transmission facility.

c. Commission Determination

391. We find that the Midwest ISO proposal to allocate costs of operating reserves on the basis of energy usage, or load, to be reasonable since it reflects cost causation principles and allocates costs appropriately to the beneficiaries of ancillary services. Since the level of regulating and contingency reserves procured is a function of the size of the load being served, cost causation principles would indicate that an allocation based on a load ratio share would be an appropriate basis for cost allocation. Also, since load is the beneficiary of the system efficiency and reliability that ancillary services support, it is appropriate that costs be allocated according to load ratio share.

392. Accordingly, it is not appropriate to allocate costs based on system capacity since the Midwest ISO will not be purchasing ancillary services based on the capacities of the various transmission systems, and therefore such an allocation does not have a cost causation basis. The fact that a portion of the payment for ancillary services represents a payment for the marginal costs of facilities is not a valid basis to allocate costs. Those facility costs, in both the energy market and ASM, are bundled as part of the total energy offer that represents the total marginal cost of energy. Therefore, since the payment for facility costs in the cleared marginal energy offer or ancillary service offer is determined by the price that clears demand for energy, the amount of energy purchased and ancillary services procured is a function of the amount of load being served by the market and is not related to the system capability of the facilities.

3. Cost Allocation To Generators and Virtual Transactions**a. Comments**

393. Midwest Transmission Customers claim that the Midwest ISO proposal is not reasonable since it fails to allocate to generators any responsibility for the costs associated with spinning and supplemental deployments that result from generators tripping off-line in real-time, even though such generator trips create much of the need for reserves. Midwest Transmission Customers also note that the proposal stands in contrast to the current practice of assigning energy costs associated with reserve deployment to resources that trip off-line and cause reserve deployments. According to Midwest Transmission Customers, the Midwest ISO proposal does not provide generators the correct incentives to perform, and may provide incentives to create

contingency reserve shortages and trigger scarcity prices in order realize higher margins on the generating units a market participant owns that continue to operate while its other generating unit is off-line due to a forced outage.¹⁴³

394. Integrys argues that both load and generators may cause ASM costs to be incurred, noting that generators that trip contribute to the need to deploy contingency reserves, and therefore the Midwest ISO proposal to allocate costs only to load does not follow cost causation principles.

395. Wisconsin Electric contends that all facets of the electric market – generators, load, physical and financial traders – benefit from a secure and reliable electric grid and therefore should share in the costs of maintaining a secure and reliable grid. Southwestern also recommends a cost allocation to virtual transactions.

b. Answers

396. The Midwest ISO explains that the current contingency reserve sharing groups allocate deployment costs to the LSEs associated with the contingent Balancing Authority, not the contingent resource, as Midwest Transmission Customers allege, and therefore the proposed allocation of contingency reserve deployment costs to load and export schedules is consistent with current practice. Also, the Midwest ISO asserts that there are significant incentives for resources to maintain low outage and trip rates since a resource that trips must purchase back undelivered energy, including energy subject to scarcity pricing that can be especially expensive. With regard to virtual transactions, the Midwest ISO contends that they do not affect the need for reserves, and are not cost-causative with regard to operating reserves.

c. Commission Determination

397. We do not consider it a shortcoming of the Midwest ISO proposal that the costs of regulating and contingency reserves are not allocated to generators since the Midwest ISO has other charges and provisions that serve the function of performance incentives for generators. These performance incentives are numerous: (1) generators are assessed RSG costs for deviations from scheduled amounts and from scheduled dispatch instructions; (2) generators must buy back energy at real-time prices for injections below scheduled amounts; (3) generators are assessed Excessive/Deficient Energy Deployment

¹⁴³ Midwest Transmission Customers also note the Commission accepted the Southwest Power Pool proposal to allocate the costs of emergency energy to market participants whose resources cause reserve activation. *See Sw. Power Pool, Inc.*, 116 FERC ¶ 61,053 at P 32 (2006).

Charges for injections outside the tolerance bands; and (4) generators are assessed Contingency Reserve Deployment Failure Charges. We consider such provisions to be appropriate and sufficient for ensuring generator performance.

398. We also do not find a compelling cost causation argument for such an assignment since the Midwest ISO is obtaining reserves to meet load requirements. Therefore, we expect shifting load patterns would have the greatest impact on reserve deployments, and other factors, such as transmission or generator outages, to have a smaller impact. Furthermore, we would consider it extremely difficult to determine an appropriate allocation to generators based on cause and effect since many of the generator outages may have no impact on reserve deployment and their impact may be dwarfed by the impact of load requirements. In summary, considering generator outages are already assessed settlement costs, pay for deviations and have other performance penalties, we do not consider an additional cost allocation to generators to be necessary to ensure the cost allocation is just and reasonable.¹⁴⁴

399. We agree with the Midwest ISO that virtual transactions do not cause the incurrence of ancillary services costs,¹⁴⁵ and therefore they should not be allocated ASM costs.

4. Cost Allocation Among Reserve Zones

a. Comments

400. A number of commenters object to the proposed cost allocation. Ameren faults the Midwest ISO proposed rates since they do not properly allocate costs when operational requirements dictate that, in order to maintain reliability, the quantities of operating reserves required to clear locally within a constrained zone are greater than they would be absent the constraint, such as when a zone has a particularly large single contingency or transmission constraints that limit the ability to import operating reserves into a zone. In these circumstances, the constrained zone will be forced to clear reserves based on maintaining reliability rather than based on economic merit and therefore additional costs are incurred, according to Ameren. Ameren also claims that the clearing

¹⁴⁴ *Colo. Interstate Gas Co. v. FPC*, 324 U.S. 581, 589 (1945); *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 118 FERC ¶ 61,119 at P 559 (2007). (“Allocation of costs is not a matter for the slide-rule. It involves judgment on a myriad of facts. It has no claim to an exact science.”)

¹⁴⁵ Virtual supply is ineligible to provide regulating or operating reserves in the proposed tariff provisions.

of reserves in the constrained area reduces the amount of reserves that must be cleared in non-constrained areas, creating a potential benefit for load in unconstrained areas and therefore some of the additional costs should be allocated to these loads.

401. To remedy these inequities, Ameren recommends adoption of the original hybrid method that shared additional costs from a constrained zone among loads in both the constrained and unconstrained zones. Specifically, Ameren supports a methodology that assigns each market participant its load ratio share of each ancillary services product at its applicable zonal or market-wide market clearing price. In the event of shortfalls between the cost paid to the provider of operating reserves and the revenue received when market participants pay their load ratio share, the shortfall would be allocated to all loads under the Ameren recommendation. Ameren asserts that its recommendation is consistent with cost causation principles and allows for hedging, and that uplift charges are shared among all market participants equitably.¹⁴⁶

402. Ameren objects to the Midwest ISO proposed charges since all additional costs are shifted to other zones or non-zonal areas that clear fewer operating reserve products than their load ratio share obligation. Ameren considers the Midwest ISO allocation inequitable because it forces these other zones to buy their products at the potentially higher market clearing price of the constrained zone and there is no way for these other zones to influence or hedge the costs they are incurring. Also, Ameren notes that the constrained zone can avoid the additional costs and pass them on to LSEs that may have had more economic alternatives to serve their own needs.

403. Since the constrained zone LSE will not pay all of the excess costs of constrained zone generators, it will realize profits on the backs of loads in unconstrained zones and will not provide an incentive to eliminate the reason for increased costs, according to Ameren. Ameren also considers it contrary to cost causation, arbitrary and capricious to have the sole determinant of which zone pays the excess costs from the constrained zone be where the least amount of economically cleared MWs occur. Ameren notes that such an arbitrary outcome will occur every time a constrained zone clears operating reserves in an amount exceeding its load ratio share.

404. Duke argues that the Midwest ISO proposal would result in the constrained zone paying nothing for the extra contingency reserves needed to ensure reliability for load within the constrained zone, notwithstanding the benefit received, thereby burdening load outside the constrained zone with the entire cost. While Duke acknowledges that load

¹⁴⁶ Ameren notes that its recommendation was approved by stakeholders by a vote of 13 for, 4 against with one abstention for application to regulating reserves and a vote of 14 for, 3 against with one abstention for contingency reserves.

outside the constrained zone will benefit from the availability of reserves within the constrained zone, it also points out that load outside the constrained zone would have procured its reserve requirements outside the constrained zone at the lower market clearing price. Duke recommends that any unfunded generator payments be uplifted equally to all load, thereby ensuring that the allocation approximates the benefits received by all. Indianapolis P&L also objects to the proposed allocation since it may cause more uplift to non-constrained zones due to the higher reserve requirements for reliability in constrained zones and thus there will not be an equitable allocation of costs.

405. Xcel considers the Midwest ISO proposed allocation to be unacceptable since it results in unreasonable cost shifts from market participants in constrained areas to market participants in the rest of the market during hours when the minimum reserve requirement constraint binds. Xcel asserts that load within constrained zones should bear their fair share of costs incurred to procure enough operating reserves from within the zone to maintain reliability. Xcel contends that the original hybrid cost allocation approved by stakeholders distributed costs equitably to all load, including load within the constrained reserve zone, on a load ratio share basis. Xcel considers this cost allocation more just and reasonable and recommends that the Commission require the Midwest ISO to revert back to the original hybrid cost allocation method.

406. Hoosier & Southern Illinois agree that the proposed hybrid method is an improvement on the original load ratio share method, although they fault the proposal for providing a subsidy from load in non-zonal areas to load in zones where additional reserves are required. Hoosier & Southern Illinois explain that the proposal will lower costs to load in zonal areas and raise the costs in non-zonal areas. As a remedy, Hoosier & Southern Illinois recommend that load in non-zonal areas pay its load ratio share of the region-wide reserve requirement at the non-zonal clearing price, instead of at the zonal clearing price in the proposal, thereby ensuring loads in non-zonal areas pay only for the costs they cause.

407. Wisconsin Electric urges the Commission not to require a zonal allocation since it is neither technically possible nor appropriate to separate costs. Wisconsin Electric argues that the costs of regulating reserves should not be allocated across reserve zones because the purpose of regulation is to manage load and generation fluctuations across the footprint and to manage interchange across all the footprint's ties with neighbors. Wisconsin Electric further notes that regulating reserves correct area control error (ACE) regardless of where in the footprint they are located and there is no reliability benefit to limiting the amount of regulating reserves carried in a particular region.

408. Certain OMS members support the proposed hybrid approach, stating that while it may not necessarily be the most cost causative approach for allocating costs, it is superior

to the load ratio share approach.¹⁴⁷ Other OMS members oppose the proposed hybrid approach, arguing that it represents a step back toward the load ratio share socialization methodology and away from a cost causative allocation.¹⁴⁸

b. Answers

409. According to the Midwest ISO, the Market Subcommittee voted to adopt its proposed cost allocation prior to filing the proposal with the Commission. While the Midwest ISO believes both its proposal and the hybrid proposal are preferable to a market-wide or zonal cost allocation, its proposal reflects the stakeholder result from the Market Subcommittee vote for the following reasons: (1) it follows cost causation principles; (2) it is technically sound; (3) it was supported by the majority of stakeholders; and (4) it produces just and reasonable rates. The Midwest ISO agrees with Ameren that its proposal results in an arbitrary allocation of costs since the sole determinant of which zone pays the excess costs from the constrained zone becomes the zone where the least amount of MWs economically clear in the market. To remedy this defect, the Midwest ISO offers to modify its proposal so that all reserve zones with the same market price are settled as one reserve zone.

410. The Illinois Commission endorses the hybrid cost allocation proposed by Ameren since rates for loads in constrained areas would be higher than rates in non-constrained areas, thereby ensuring that costs are paid by those who cause costs to be incurred. The Illinois Commission also favors this cost allocation since it ensures strong price signals and that proper incentives exist to remedy transmission constraints. It faults the Midwest

¹⁴⁷ Wisconsin PSC, South Dakota PUC, North Dakota Commission, Nebraska Power Review Board, Montana PSC, Missouri PSC, Minnesota PUC, Michigan PSC, Kentucky PSC, Iowa Utilities Board and the Indiana Utility Regulatory Commission support the Midwest ISO's modified hybrid approach. These members recommend that the Commission direct the Midwest ISO to analyze the results of its proposed methodology one year after the start of the ASM and provide a report to stakeholders (1) detailing cost and revenue information for the reserve zones; (2) comparing to what each zone would have paid under the original load ratio share proposal, the hybrid proposal, a pure zone approach; and (3) including recommendations.

¹⁴⁸ The Ohio Commission, the Indiana Office of Utility Consumer Counselor, and the Illinois Commission support the original hybrid methodology and consider the modified hybrid proposal filed by the Midwest ISO to represent a step back toward the load ratio share socialization methodology and away from a cost causative allocation.

ISO proposal for exempting constrained zones from uplift associated with the allocation of their costs, noting that these zones already benefit from the market since costs are being spread over a larger pool than in a zonal approach.

411. Ameren responds to the Midwest ISO answer by restating its position that the Midwest ISO proposal does not reflect cost causation principles since it allocates all the additional costs of constrained and therefore high reserve requirement zones to other zones or non-zonal areas that clear fewer operating reserve products than their load ratio share obligation. Ameren notes that the Midwest ISO proposed solution to settle all reserve zones with the same market price as one reserve zone still results in market participants within constrained zones avoiding their share of costs. For these reasons, Ameren restates its recommendation to implement its proposed hybrid proposal.

c. Commission Determination

412. We find that since the Midwest ISO proposed cost allocation is not based on cost causation principles and is inequitable, it results in unjust and unreasonable rates. We also find that the proposed cost allocation harms the efficiency of the proposed ASM by interfering with price signals. Accordingly, we require the Midwest ISO to submit, in a compliance filing within 30 days of the date of this order, a revised allocation as described in detail below.

413. To provide context for our findings, we first explain how the Midwest ISO cost allocation works. The first charge, the locally allocated zonal charge is assessed on the lesser of reserves in the zone or a zonal obligation that represents the zone's load ratio share of market-wide reserves. Therefore, if the zone reserve requirement is greater than the zonal obligation, zone load pays an amount based on the lower market-wide obligation and the difference between the lower market-wide obligation and the zonal reserve requirement is allocated to all other zones.

414. The second charge, the exchange zonal reserve charge rate, will be zero to high reserve requirement zones, or constrained zones. This is because the exchange zonal reserve charge rate is based on the zonal obligation minus the zonal reserve, and when the obligation is equal to or less than zonal reserves, as it will be for high reserve requirement zones, the difference is zero or less than zero.¹⁴⁹

415. Conversely, load in low reserve requirement zones (i.e., zones with lower reserve requirements than their load ratio share of reserves) pay for their zonal reserves in the locally allocated charge plus the cost of other reserves in the exchange zonal reserve charge. The exchange zonal reserve charge is designed so that load in low reserve

¹⁴⁹ The Midwest ISO proposal calculates all less than zero results as zero.

requirement zones pays for the difference between their load ratio share of reserves and their lower zonal reserve requirement and the price component of that charge is a weighted average price that includes the higher market clearing prices of the constrained zones.

416. Taken to its essential elements, the Midwest ISO proposal prices reserves at their market prices, so that resources see differing and transparent market prices based on their location, but load throughout the Midwest ISO pays a cost that has been adjusted to make load in low cost reserve zones pay more and load in high reserve cost zones pay less. As a threshold matter, we find it problematic to average the cost of reserves in an ASM market such as the Midwest ISO's that has several zones with significant transmission constraints and therefore potentially significant differences in market clearing prices, depending on location. In such a market, it is important that both resources and load see a clear price signal so that all market participants in high reserve cost zones will have incentives to develop or obtain alternatives to high cost reserves.

417. Also, the Midwest ISO proposal fails to recognize cost incurrence since it allocates costs in high reserve requirement zones to the rest of the Midwest ISO. The purpose of zones is to determine minimum reserve requirements for load within a defined geographic area, thereby ensuring reserves are located to effectively resolve local reliability needs and ensure optimum operating conditions, as the Midwest ISO explains in its proposal.¹⁵⁰ Therefore, the reason a zone is a high reserve requirement zone is because transmission constraints limit the amount of reserves that can be obtained from resources outside the zone and the provision of reserves is accordingly limited to resources in the zone.¹⁵¹ We also note that the definition of reserves in the Applicable Reliability Standards characterizes reserves based on their ability to resolve local reliability requirements.¹⁵²

418. We are concerned that the justification given by the Midwest ISO, that reserves from the higher reserve requirement zone may be purchased to meet the needs of unconstrained and lower reserve requirement zones, does not comport with the reason the reserves were committed in the first place, namely that adequate reserves were needed to

¹⁵⁰ Roy Jones Test. at 81.

¹⁵¹ Responding to Wisconsin Electric's comments regarding regulating reserves, those reserves would not be required in the zone if the load in that zone did not exist, and therefore the primary purpose of those reserves is to ensure reliability in the zone.

¹⁵² We note the Commission has recognized the locational characteristics of reserves in other ISOs. *See New England Power Pool and ISO New England, Inc.*, 115 FERC ¶ 61,175 (2006).

meet the locational needs of the load in the constrained zone. In other words, the incurrence of reserve costs in the zone is caused by the need to ensure reliability in the zone itself. While the reserves in a high reserve requirement zone can also assist in ensuring reliability in neighboring zones, this outcome is secondary to the primary purpose of committing the reserves for local reliability requirements.

419. Finally, the Midwest ISO proposal is inequitable because it requires market participants in zones with low reserve requirements to pay for the costs of their reserves plus an allocation of costs from the higher reserve requirement zones priced to include the higher market clearing price of the constrained zones. Zones that clear the lowest amount of reserves would end up paying the largest allocation of additional costs from higher reserve requirement zones. While it is understandable that reserves from the high reserve requirement zone can benefit nearby, adjacent zones, we do not consider an allocation of high cost reserves to low cost, and sometimes distant, zones to be commensurate with the benefits of these reserves. This inequity and lack of commensurate benefits is particularly problematic in an RTO with the constrained zones and extensive geographic profile of the Midwest ISO. Considering that load in a low reserve requirement zone currently only pays for the reserve costs associated with its Balancing Authority, we do not consider it equitable to now require this load to pay for its reserve costs plus a potentially large allocation of costs from higher reserve requirement zones and we cannot find a reasonable basis for such an increase in costs.

420. While the original hybrid method endorsed by Ameren and the Illinois Commission shares the uplift associated with constrained zones more equitably among all zones, it is based on the same cost allocation principles as the Midwest ISO proposal: it limits the costs allocated to the higher reserve requirement zones to the share of zone load to market-wide load and shares costs above this level with other zones. Accordingly, it suffers the same defects as the modified hybrid method proposed by the Midwest ISO and we therefore decline to accept this method for the same reasons discussed in our discussion of the Midwest ISO proposal.

421. For the foregoing reasons, we require the Midwest ISO to file a revised cost allocation that allocates the costs of reserves in the zone to load in the zone.¹⁵³ Such an allocation will ensure clear price signals, reflect cost causation and avoid inequities among market participants. We require the Midwest ISO to file its revised allocation in a compliance filing to be submitted within 30 days of the date of this order.

¹⁵³ We note that ISO New England has features similar to the Midwest ISO's, such as constrained zones with high reserve costs, and utilizes a zonal allocation for reserve market costs.

5. Allocation of Ancillary Services Costs to Grandfathered Agreements

a. Background

422. The Midwest ISO proposes to allocate operating reserve procurement costs to all load, including carved-out grandfathered agreement (GFA) load¹⁵⁴ and carved-out GFA exports under Schedules 5 and 6. The Midwest ISO considers its proposed treatment to be consistent with the allocation of Schedules 10 and 17 charges to carved-out GFAs, which has been deemed reasonable and appropriate based on the fact that GFA customers benefit from the markets. The Midwest ISO further notes that failure to allocate such charges to carved-out GFAs would result in these costs being uplifted to all other load and exports thereby subsidizing the cost of this service. The Midwest ISO asserts that this would not be consistent with cost-causation principles.

423. The Midwest ISO asserts that to the extent carved-out GFA load has historically procured operating reserves from resources no longer qualified to provide operating reserves, such load will no longer be able to meet their obligations via these non-qualified resources when the consolidated Midwest ISO Balancing Authority and energy and ancillary services market are implemented. The Midwest ISO explains that following certification as the Balancing Authority for the Midwest ISO, the Midwest ISO will have the obligation to provide operating reserves throughout the Midwest ISO Balancing Authority Area, including on behalf of load being served by carved-out GFAs, and therefore costs associated with providing such service are reasonably and appropriately allocated to all beneficiaries of that service.

b. Comments

424. Duke supports the allocation of Schedule 3, 5, and 6 costs to carved-out GFAs since all load within the Midwest ISO benefits from the availability of ancillary services and should pay for those services, including load served under GFAs. Duke agrees with the Midwest ISO that uplift of ancillary service charges would not be consistent with cost causation principles and the assumption of Balancing Authority functions by the Midwest

¹⁵⁴ Carved-out GFAs are agreements held by Midwest ISO market participants that elected not to include these agreements in the Midwest ISO energy market and did not choose one of the settlement options made available by the Commission at the start of the Midwest ISO energy markets. See *Midwest Indep. Transmission Sys. Operator, Inc.*, 108 FERC ¶ 61,236 (2004) (GFA Order).

ISO means GFA loads will benefit from the services provided by the Midwest ISO and should pay for them. Duke notes that since the transition period¹⁵⁵ will end before the ASM starts, GFA parties cannot claim that they have special treatment.

425. Noting that the Midwest ISO did not discuss its proposal in the stakeholder process, Hoosier & Southern Illinois claim that the Midwest ISO proposal requires carved-out GFAs to pay for more than implementation costs, whereas the Commission has only required that carved-out GFAs should pay for a share of the costs of implementing the energy markets.¹⁵⁶ Hoosier & Southern Illinois also assert that these costs are procurement costs and the Commission explicitly ruled that parties to carved-out GFAs would not have to procure energy in the market. They disagree with the Midwest ISO statement that there is no reason to allocate costs to carved-out GFAs in a manner that differentiates parties to the GFAs from other parties, noting that there is substantial case law supporting the notion that the existence or non-existence of a contractual relationship is a factor that can justify differences in charges to different customers. Therefore, for these reasons and since the Midwest ISO has not claimed the success of the ASM would be imperiled by carving out the GFAs from the ASM,¹⁵⁷ Hoosier & Southern Illinois recommend that the Commission carve out these GFAs from the ASM.

426. The Michigan Power Agencies argue that GFA customers were assessed Schedules 10 and 17 costs because they were new services not contemplated at the time the GFAs were executed and the Midwest ISO filing already accounts for such administrative costs associated with the ASM by allocating them to Schedule 17. They further assert that Schedules 3, 5 and 6 are not administrative cost adders and therefore subjecting GFAs to these costs is equivalent to subjecting GFAs to Day 2 energy markets, an action the Commission has rejected for GFAs subject to the Mobile-Sierra

¹⁵⁵ The Commission accepted provisions providing that transactions under GFAs would not be placed under the Day 1 Midwest ISO tariff for an initial six-year transition period after the Midwest ISO began to provide transmission service. The period ends February 2008. *See Midwest Indep. Transmission Sys. Operator, Inc.*, 84 FERC ¶ 61,231 at 62,167-70 (1998).

¹⁵⁶ *See* GFA Order, 108 FERC ¶ 61,236 at P 298.

¹⁵⁷ Hoosier & Southern Illinois argue that the Commission's determination that carved out treatment is acceptable so long as the carve out does not prevent the reliable operation of markets should be controlling in determining this issue. *See* GFA Order, 108 FERC ¶ 61,236 at P 89.

doctrine.¹⁵⁸ Accordingly, Michigan Power Agencies recommend that carved-out GFAs should likewise be carved out of the ASM and not assessed any Schedule 3,5 or 6 charges unless the GFA customer elects to acquire services from the ASM under such schedules rather than self-supply such services.

427. Detroit Edison agrees, noting that Attachment P of the TEMT exempts GFAs from the specific terms and conditions of the TEMT and the Midwest ISO has not provided a supportable basis for changing the exempt status. Detroit Edison argues that imposing separate ancillary service charges on carved-out GFAs would result in double payment for the same services since the price of ancillary services is embedded in the bundled charges under the GFAs. Midwest Transmission Customers consider the Midwest ISO proposal to be unreasonable since GFAs that provide for operating reserves will receive no benefit from the ASM and will pay duplicative costs for self-scheduled reserves and reserves committed by the Midwest ISO. Alcoa also protests paying twice for the same services, noting that its GFA with Vectren covers all ancillary services.

428. Dairyland requests confirmation that Schedule 3,5 and 6 charges will not be imposed on loads that are pseudo-tied out of the Midwest ISO footprint into the control area of the GFA customer or, in the alternative, protests allocation of costs since customers with these characteristics will not use ancillary services.

c. Answers

429. The Midwest ISO asserts that if load being served under carved-out GFAs is not allocated its share of the costs of procuring operating reserves, these costs will need to be uplifted to all other load, subsidizing carved-out GFAs. Such uplift and cross-subsidization would not be consistent with cost-causation based principles for the allocation of the costs of operating reserves, according to the Midwest ISO. The Midwest ISO also contends that allocation of operating reserves costs to carved-out GFAs is consistent with the treatment of Schedules 10 and 17 cost allocation to such entities since the rationale for the allocation of Schedule 10 costs to carved-out GFAs was justified based on the benefits resulting from the existence of the Midwest ISO.¹⁵⁹ The Midwest ISO maintains that the procurement of operating reserves is a function necessary for the reliable and secure operation of the transmission system and that carved-out GFAs

¹⁵⁸ See *WPPI*, 493 F.3d at 273. Hoosier & Southern Illinois agree these are not administrative costs and instead involve the actual procurement of operating reserves.

¹⁵⁹ See *Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1368 (D.C. Cir. 2004) (“[A]ll transmission customers – bundled, unbundled, grandfathered, whatever – benefit from the enhanced reliability and security the Midwest ISO brings to the transmission grid.”).

benefit from the availability and deployment of operating reserves. It asserts that it is not possible to segregate carved-out load from other load if there is an event that requires the deployment of contingency reserves or regulation.

430. Hoosier & Southern Illinois respond to the Midwest ISO answer by noting that the Commission found that carving out certain GFAs would not prevent the reliable operation of the market and would not prevent operation of that market from achieving overall benefits.¹⁶⁰ They argue that the Commission has therefore already rejected the notion that carved-out GFAs may be modified if the modification would result in financial benefit to non-parties and other market efficiencies. They further assert that the Midwest ISO does not allege that failure to carve out GFAs would impair its ability to provide service, excessively burden other consumers, or result in a rate that will be unduly discriminatory. Hoosier & Southern Illinois also point out that the Midwest ISO does not consider the effect of its proposal on GFA parties, and therefore strays from the precedent of the United States Court of Appeals for the D.C. Circuit and Commission practice.¹⁶¹

431. Hoosier & Southern Illinois further assert that requiring parties to GFAs to comply with ASM schedules would disrupt their scheduling practices, and thus modify their schedules. They therefore believe that, contrary to the Midwest ISO's assertion, the Midwest ISO's proposal is not analogous to the Commission-accepted allocation of Schedules 10 and 17.

432. Midwest Transmission Customers disagree with the Midwest ISO's claim that it must procure operating reserves for carved-out GFAs since it is the single balancing authority within the region, noting that if this statement were true, carved-out GFAs today would be required to obtain all their operating reserves through the existing balancing authorities. They assert that no such requirement exists today since parties to GFAs have agreements that address the provision of operating reserves and there is no reason these agreements cannot continue to be honored.¹⁶² Midwest Transmission Customers also argue that the Midwest ISO offers no proof that the public interest demands shifting costs to GFA parties.

¹⁶⁰ GFA Order, 108 FERC ¶ 61,236 at P 89.

¹⁶¹ See *Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,166 (2007) (2007 GFA Order).

¹⁶² Midwest Transmission Customers also contend that if the Midwest ISO can continue to administer a contingency reserve sharing group that accommodates reserves provided by entities external to the Midwest ISO, then carved out GFAs should be afforded comparable treatment.

d. Commission Determination

433. We find that the Midwest ISO should allow parties to carved-out GFAs to meet their ancillary service requirements through the provisions in their GFAs instead of requiring that the parties procure such services under the ASM. However, to the extent that the parties to a carved-out GFA do not schedule sufficient reserves in real-time, they are essentially not meeting their reserve requirements and are relying on the ASM. In those instances, it is appropriate for the Midwest ISO to assess the transmission owner providing service under the carved-out GFA charges for the reserves supplied in real-time through the ASM. This is essentially the same finding the Commission already made in allowing parties to carved-out GFAs to supply and deliver energy through the provisions of their GFAs, but subjecting the transmission owner providing service under the carved-out GFA to the real-time market to cover any real-time imbalances.¹⁶³

434. We disagree with the Midwest ISO's and Duke's arguments for allocating all ancillary services costs to carved out GFAs. Both the Commission and the United States Court of Appeals for the D.C. Circuit have found that transmission owners must pay the administrative costs associated with running the Midwest ISO (Schedule 10) and with developing and running the Midwest ISO's energy markets (Schedule 17) on behalf of all their customers (including those covered by carved-out GFAs) because all parties benefit from, for example, the reliability and efficiency gains that come with the creation of the RTO and the energy markets.¹⁶⁴ In addition, the Commission and the court found that transmission owners could pass-through Schedule 10 and 17 charges to customers served under carved-out GFAs because Schedules 10 and 17 recover costs for services provided by the Midwest ISO that are fundamentally new and different from those services provided under the GFAs.¹⁶⁵

¹⁶³ *Midwest Indep. Transmission Sys. Operator, Inc.*, 108 FERC ¶ 61,236, at P 145 (2004) (GFA Order), *order on reh'g*, 111 FERC ¶ 61,042 at P 371 (GFA Rehearing Order), *order on reh'g*, 112 FERC ¶ 61,311 (2005) (GFA Rehearing Order II) (collectively, the GFA Orders), *aff'd sub nom. WPPI*, 493 F.3d at 239.

¹⁶⁴ *Midwest Indep. Transmission Sys. Operator, Inc.*, Opinion No. 453, 97 FERC ¶ 61,033, at 61,169-70 (2001), *order on reh'g*, Opinion No. 453-A, 98 FERC ¶ 61,141 (2002), *order on remand*, 102 FERC ¶ 61,192 (2003), *reh'g denied*, 104 FERC ¶ 61,012 (2003), *aff'd sub nom. Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361 (D.C. Cir. 2004).

¹⁶⁵ *Transmission Owners of the Midwest Indep. Transmission Sys. Operator, Inc.*, 110 FERC ¶ 61,339, *order on reh'g*, 113 FERC ¶ 61,122 (2005), *aff'd sub nom.*, *E. Ky.*

(continued...)

435. Here, however, parties to carved-out GFAs currently are not charged under the TEMT for products (*e.g.*, transmission delivery and energy) that are already provided through the carved-out GFAs.¹⁶⁶ Instead, those products are provided directly pursuant to the underlying carved-out GFA. Similarly, parties to carved-out GFAs that are scheduling and meeting their own operating reserve requirements directly through their GFAs should not be assessed charges under Schedules 3, 5 and 6. Unlike the administrative expenses of setting up or running the ASM, which will be recovered through Schedule 17 and which carved-out GFAs will continue to pay, the ASM charges that the Midwest ISO proposes to assess to carved-out GFAs under Schedules 3, 5 and 6 are for services that are not fundamentally different from the ancillary services that are already provided under the existing GFA arrangements. To the extent that parties to carved-out GFAs meet their ancillary service requirements through provisions in the GFAs, they should not pay the TEMT charges for these same services.

436. As the Commission and the United States Court of Appeals for the D.C. Circuit have stated, subjecting GFA parties to the energy market scheduling and settlement provisions of the TEMT would pervasively disrupt the GFA parties' scheduling practices and would not just affect the contracts but would modify them.¹⁶⁷ Here, subjecting carved-out GFAs to Schedules 3, 5 and 6 in the manner that the Midwest ISO proposes would disrupt the scheduling practices provided under the carved-out GFAs and essentially modify them. Thus, we are faced here with the same issue the Commission recently addressed when it accepted the Midwest ISO's proposal to allow the carved-out GFAs to continue after the initial transition period.¹⁶⁸ There, the Commission explained that:

[A]s the court noted in [*WPPI*], the carved-out GFAs are protected by the *Mobile-Sierra* "public interest" standard of review,¹⁶⁹ and are private

Power Coop., Inc. v. FERC, 373 F.3d 1361 (D.C. Cir. 2007), 489 F.3d 1299 (D.C. Cir. 2007).

¹⁶⁶ See Midwest ISO, FERC Electric Tariff, Third Revised Vol. No. 1, Sheet No. 454C at § 38.8.4.6 (Market Settlement and Exemption from Certain Charges).

¹⁶⁷ See, *e.g.*, *WPPI*, 493 F.3d at 273.

¹⁶⁸ *Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,166 (2007) (Post-Transition Order).

¹⁶⁹ We reiterate that *WPPI* refers to all three categories of carved-out GFAs (*i.e.*, those GFAs that do not specify a standard of review, those that specifically provide that

(continued...)

contracts “subject to only limited [Commission] intervention.” The court also warned that it has “previously cautioned [the Commission] against ‘cavalierly disregarding private contracts.’” Accordingly, we must determine whether “unequivocal public necessity” requires abrogating “the bargain between the parties to GFAs protected by the *Mobile-Sierra* doctrine.” [170]

437. In the instant case, we find that no party has presented convincing evidence that the public interest requires us to abrogate the existing carved-out GFAs to make them subject to the ancillary service charges under the new ASM. The Commission’s findings in the Post-Transition GFA Order apply equally in this case:

[G]iven the comparatively small number of megawatts associated with carved-out GFAs and Midwest ISO’s conclusion that “GFAs do not significantly affect other transmission customers,” we cannot find that the cost-shifts alleged by protesters rise to the level of discrimination required for contract modification under the *Mobile-Sierra* doctrine. In balancing the interests, we find that there would be relatively small advantages to integrating the carved-out GFAs into the markets in 2008, compared to the clear disadvantages that would result from not exempting them and requiring them to conform to the TEMT. As we stated in the GFA Order, carving out the GFAs protected by *Mobile-Sierra* “is possible only because of the small number of megawatts involved; larger carve-outs, in contrast, would require us to reevaluate this treatment.” Therefore, “unequivocal public necessity” does not require that we abrogate this small number of carved-out GFAs and integrate them into the market beyond the transition period.

Finally, we note that protesters have not shown other circumstances that would justify modifying the GFA contracts under the “public interest” standard of review. We find that the court’s holding that “petitioners do not claim – let alone prove – that the cost shift [is] so severe as to threaten the ‘financial ability’ of any utility ‘to continue its service,’ or that the cost shift amount[s] to an ‘excessive’ burden on any other market participants”

they are protected by *Mobile-Sierra*, and those outside the Commission’s jurisdiction) as “GFAs protected by the *Mobile-Sierra* doctrine and subject to the public interest standard of review.” *WPPI*, 493 F.3d at 270.

¹⁷⁰ Post-Transition Order, 121 FERC ¶ 61,166 at P 44 (internal citations omitted) (footnote in original).

applies here. Protesters do not allege a significant change in circumstances under which continuing the current GFA treatment would impair any utility's ability to do business, or that would impose an excessive burden on other utilities. The end of the transition period, as we have discussed above, is not significant enough to justify modification of the existing GFAs or a change in their treatment.^[171]

438. We have no basis to conclude that the resources used in carved-out GFA transactions are non-qualifying, other than the Midwest ISO's assertion that this is the case. We find no tariff provisions that disqualify such resources, and no party has raised objections that the Midwest ISO has disqualified their resources. We further note that Alcoa, a market participant with carved-out GFAs, indicates that the Midwest ISO has not taken any steps to substitute itself as the provider of ancillary services and has not worked out an arrangement to receive the revenue collected for providing ancillary services through GFAs. For these reasons, we continue to believe that carved-out GFAs will be scheduled by market participants for their energy and reserve needs in the future when the ASM is operational, as they do currently, and therefore we do not find that this transaction structure provides a basis to allocate ancillary services costs to carved-out GFAs,¹⁷² except in the instance of a carved-out GFA leaning on the system in real-time.

439. Further, we disagree with the assertion of parties that *no* ancillary services costs should be allocated to carved-out GFAs. We agree with parties that the market will not be imperiled by carving out GFAs and ancillary services do not represent a new service that would warrant a cost allocation where the services are supplied directly, pursuant to the carved-out GFA. However, we consider our finding that certain real-time costs should be allocated to carved-out GFAs to be equitable since it ensures that other market participants do not subsidize carved-out GFA transactions that lean on the system, and will result in a just and reasonable cost allocation that does not disrupt the scheduling practices provided under the GFAs.

440. As we state above, we find that carved-out GFAs should be subject to ancillary service charges to the extent they rely on the ASM. We recognize that the Midwest ISO will have to determine what portion of real-time ancillary services costs are attributable to carved-out GFAs (*e.g.*, the cost of additional reserves that must be purchased when a carved-out GFA transaction is not in balance in real-time). Accordingly, we require the

¹⁷¹ *Id.* at 48-49 (internal citations omitted).

¹⁷² We note that the Commission has determined to continue the treatment of carved out GFAs past the transition period. *See Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,166 at P 37 (2007) (2007 GFA Order).

Midwest ISO to allocate a portion of the real-time ancillary services costs to carved-out GFAs based on costs that are caused by carved-out GFAs that do not meet the reserve requirements caused in real-time, consistent with cost causation principles, and to submit such an allocation in a compliance filing within 30 days of the date of this order.

O. Market Start Readiness Issues

1. Readiness

441. In the Guidance Order, the Commission directed the Midwest ISO to submit readiness and Reversion Plans with the features necessary to ensure that the start-up of the ASM will not adversely affect reliability.¹⁷³ The Commission required that: (1) the Midwest ISO certify to the Commission, 45 days before ASM market startup, the reliability and readiness of its systems¹⁷⁴ and (2) the Midwest ISO file, on an informational basis at least three months prior to ASM start, the readiness auditor's recommendations for metrics and the status of each metric related to ASM operation readiness, as well as the auditor's recommendation of a plan to ensure the ASM is being developed, tested, and operated to ensure reliability and efficiency.

a. Midwest ISO Proposal

442. The Midwest ISO states that it has engaged the services of a Readiness Advisor to provide transparency to all stakeholders in the periodic reporting of readiness progress and to assure that appropriate preparation takes place prior to market launch. The Midwest ISO states that the Readiness Advisor will facilitate the creation of ASM readiness benchmarks for filing with the Commission at least ninety days prior to market start. Based on these benchmarks, the Readiness Advisor will periodically measure and report on ASM readiness progress to stakeholders and the Midwest ISO Board of Directors and executives. In addition, as part of the Commission-mandated readiness certification process, a final ASM readiness report is scheduled to be submitted at least forty-five days prior to market launch.¹⁷⁵

¹⁷³ Guidance Order, 119 FERC ¶ 61,311 at P 47.

¹⁷⁴ This certification must also include certification that the Midwest ISO has a monitoring system in place assessing actual resource capabilities, taking into account ambient temperatures and other operating conditions, and certification as a Balancing Authority by the Electric Reliability Organization (ERO).

¹⁷⁵ Midwest ISO Proposal at 57.

b. Comments

443. Wisconsin Electric requests that the Commission require the Midwest ISO to satisfy readiness metrics prior to ASM launch.¹⁷⁶

444. Indianapolis P&L requests that the Commission affirm that the readiness requirement set forth in the Guidance Order remains in effect and will be monitored closely by the Commission and NERC.

445. NIPSCO requests that the Commission require the Midwest ISO and the Local Balancing Authorities to undertake rigorous training and testing before the final Balancing Authority alignment and before the ASM is permitted to move forward.

446. Integrys asserts that it is not confident that the Midwest ISO has developed an adequate plan to ensure a successful and reliable market start. Integrys asserts that the Midwest ISO has failed to provide an adequate backup for a loss of all inter-control center communication protocol communications and that the loss of these communications could result in a market-wide loss of regulation.

447. Integrys argues that June 2008 is too early for market start in light of start-up problems such as the inter-control center communication protocol back-up issue, for which the Midwest ISO has not yet developed solutions. Integrys asserts that a fall 2008 start-up would not allow enough time to remediate and retest any inadequate internal controls to avoid reporting deficiencies in market participants' annual reports under the Sarbanes-Oxley Act of 2002. In order to allow time for the Midwest ISO to address these concerns, Integrys recommends a spring 2009 market start.

c. Commission Determination

448. We accept the Midwest ISO proposal to file the readiness benchmarks 90 days prior to the market start and the readiness certification 45 days prior to the market start. The Midwest ISO states that it has engaged the services of a Readiness Advisor to provide transparency to all stakeholders in the periodic reporting of readiness progress and to ensure that appropriate preparation activities have taken place prior to market launch. We agree with Wisconsin Electric that the readiness benchmarks provided by the Midwest ISO should identify benchmark metrics and the status of progress toward achievement of the metrics, in order to maintain transparency in the reporting process.

¹⁷⁶ Wisconsin Electric states that such readiness metrics should: (1) be developed with input from stakeholders; (2) address the readiness of Midwest ISO, the Local Balancing Authorities, and the market participants; and (3) be filed with the Commission.

We encourage the Midwest ISO to continue discussions with stakeholders on readiness issues and to utilize their input in developing metrics, and thereby build confidence in a successful market start.

449. We agree with NIPSCO that it is important that the Midwest ISO and the Local Balancing Authorities undertake rigorous training and testing before the ASM becomes effective. In this regard, we note that the Midwest ISO has a plan to address training and testing prior to the implementation of the ASM.¹⁷⁷

450. We agree with Integrys that a reliable back-up plan for a failure of the inter-control center communication protocol is an important readiness issue. Thus, we require the Midwest ISO to include in its readiness plan a metric that addresses loss of inter-control center communication protocol communications. The June 2008 ASM launch will be contingent on certification of the Midwest ISO as the Balancing Authority and an audited verification that the readiness metrics have been achieved. We consider Integrys' recommendation to delay the proposed ASM start date from June 2008 to spring 2009 to be premature and more appropriately addressed after stakeholders have had access to relevant information on readiness and have reviewed the testing results. In this regard, the Commission emphasizes that it will review the readiness filings closely for testing, training, and the results of market trials in determining the market start date.

2. Reversion Plan

451. In the Guidance Order, the Commission required the Midwest ISO to propose a Reversion Plan to address system operations in the event of a severe operations failure.¹⁷⁸ The Commission required that the plan be filed with the Commission no later than three months prior to the start of the ASM. The Commission stated that the plan should explain how the Midwest ISO intends to rely, in the event of a failure of the operating systems used to operate as a Balancing Authority, on alternative systems that can analyze and monitor: (1) area control error in the event of a failure in the centralized regulation monitoring system, and (2) contingency reserves in the event of a failure in the centralized reserve monitoring system.

a. Midwest ISO Proposal

452. The Midwest ISO states in its current filing that it is working with the current Balancing Authorities to develop a comprehensive Reversion Plan, as mandated by the

¹⁷⁷ Midwest ISO Proposal at 56.

¹⁷⁸ Guidance Order, 119 FERC ¶ 61,311 at P 47.

Guidance Order.¹⁷⁹ The Midwest ISO explains that it is in the process of reviewing a draft Reversion Plan in various Midwest ISO committees, sub-committees and task teams. Having already collected comments on the draft plan, the Midwest ISO states that it is on target to have a final Reversion Plan in place three months prior to ASM start as required by the Guidance Order. Under the current schedule, this means the Reversion Plan would be filed with the Commission by March 1, 2008. For informational purposes, the Midwest ISO submitted a draft of its Reversion Plan as Attachment I to its answer.

b. Comments

453. Southwestern generally supports the draft ASM Reversion Plan. However, Southwestern argues that the Midwest ISO should incorporate additional triggers for the Reversion Plan such as if ASM prices are frequently priced at offer caps, if scarcity or emergency prices are frequently offered for ancillary services and if locational marginal prices increase significantly as a result of the ASM. Southwestern also requests that the resources be required to offer ancillary services at cost-based prices once the Reversion Plan is in place, and urges that costs should be recovered from those resource owners who are the main beneficiaries of the ASM. Because the Midwest ISO proposes to suspend its code of conduct when the Reversion Plan is in place, Southwestern requests that the Commission order the Midwest ISO to reactivate its code of conduct upon the conclusion of the Reversion Plan.

454. Midwest Transmission Customers point out that a partial or complete systems failure that triggers the Reversion Plan may prevent the market from properly functioning. Midwest Transmission Customers note that at such times there may not be any physical shortage of capacity to meet the energy and operating reserve requirements, as the emergency conditions may be solely associated with a system breakdown or loss of communications infrastructure. Therefore, they request that the Commission require that the Midwest ISO add market circuit breaker provisions to its proposal in order to mitigate system breakdown if a loss of communications infrastructure triggers the Reversion Plan.

455. Indianapolis P&L notes that the Commission has already required the Midwest ISO to file a fully-developed Reversion Plan at least three months prior to market start. Indianapolis P&L requests that the Commission affirm this requirement and require the Midwest ISO to continue to work with stakeholders on the development of a Reversion Plan.

456. Xcel raises concerns related to whether the Midwest ISO's existing infrastructure will be adequate after the ASM launch. Xcel states that the Midwest ISO's back-up plan

¹⁷⁹ Midwest ISO Proposal at 58.

for loss of its primary control center and/or primary Energy Management System is to fall over to another facility within one-half hour or more. The Midwest ISO currently has two fully-functional, fully-staffed control centers. Xcel believes the Midwest ISO should consider a setup similar to that used in PJM, where the Valley Forge control center can immediately transfer control to the Greensboro backup control center. It states that this could be accomplished by locating the Midwest ISO's backup Energy Management System servers in its existing St. Paul facility.

457. Xcel also urges the Commission to require that the Midwest ISO security center and market tools be able to operate in islanded conditions.¹⁸⁰

458. In its answer to the Midwest Transmission Customers' request to add a market circuit breaker, the Midwest ISO states that section 48.3 of the TEMT already provides a pricing methodology for use in the event of system failures.

c. Commission Determination

459. We accept the Midwest ISO's proposal to file the Reversion Plan no less than 90 days prior to the market launch.

460. In response to the ASM price issue raised by Southwestern, we find that the phased transition for economic withholding conduct and impact thresholds, discussed in the mitigation section of this order, will sufficiently address the potential exercise of market power during market start-up and ensure that market rates are just and reasonable. For this reason, we do not consider cost-based rates to be required in the Reversion Plan. We agree with Southwestern that the Midwest ISO must reactivate its code of conduct upon the conclusion of the Reversion Plan and note that Attachment I, section 7.2.7 & 7.2.8 suspends the code of conduct and section 9.1.1 re-establishes the code of conduct. We will review these provisions in the final Reversion Plan to be filed prior to March 1, 2008.

461. In response to Xcel's comments calling for the Midwest ISO to have a back-up plan for performing the Balancing Authority functions similar to that in PJM, we point

¹⁸⁰ Xcel notes that once the ASM is created and the current balancing authorities are collapsed into a single Balancing Authority Area, the localized automatic generation control and unit control will be lost. Xcel argues that without the ability to solve for multiple areas, a single unit dispatch system solution will send out improper contingency reserve signals, unit regulation signals, load following signals, and base point instructions. Thus, Xcel states, a single unit dispatch system solution will not respect islanded boundaries, constraints, frequency, trapped generation, and trapped load.

Xcel to the Draft ASM Reversion Plan, where the Midwest ISO proposes a three-phase plan to revert Balancing Authority functions back to Local Balancing Authorities. The Commission will review the final ASM Reversion Plan closely when it is filed three months prior to the market start date. We agree with Xcel's concern regarding the operation of the Midwest ISO security center and operating tools in islanded conditions. We therefore require the Midwest ISO to provide in its Reversion Plan information on how it will handle the back-up plan and operating tools.

462. We find the Midwest ISO's explanation in its answer to Midwest Transmission Customers, that section 48.3 of the TEMT already provides procedures for revising locational marginal prices and other market clearing prices in response to market implementation errors and emergency system conditions, is responsive to their concerns. This section of the TEMT allows for a correction of market prices during emergency system conditions, including equipment malfunctions such as telecommunications, hardware, or software failures, as defined in section 1.80b. Thus we do not require the Midwest ISO to add market circuit breaker provisions to its proposal.

3. Balancing Authority Agreement

463. In the Guidance Order, the Commission required that the Balancing Authorities and the Midwest ISO conclude their consolidation negotiations three months prior to the market start.¹⁸¹ The three-month buffer would allow the Midwest ISO to become the NERC-certified Balancing Authority and include this certification in its market readiness certification application, which is to be filed with the Commission at least 45 days prior to the market start.¹⁸²

a. Midwest ISO Proposal

464. The Midwest ISO states that, in accordance with the Guidance Order, it will be concluding Balancing Authority consolidation negotiations and filing the amended Balancing Authority Agreement at least three months prior to market start, so that the Midwest ISO can be certified as a Balancing Authority by the ERO and include this certification in the Midwest ISO's market readiness application to the Commission.

b. Comments

465. Southwestern states that the Midwest ISO has not proposed any timeline for making the Balancing Authority agreement filing with the Commission. It argues that

¹⁸¹ Guidance Order, 119 FERC ¶ 61,311 at P 49.

¹⁸² *Id.*

after consolidation, Local Balancing Authorities will perform only data communication and reporting functions, and that the Midwest ISO does not justify their continued existence. Southwestern also requests that, in light of the estimated savings, the Commission require that most, if not all, of the Local Balancing Authority functions be transferred to the Midwest ISO.

466. Hoosier & Southern Illinois raise concerns regarding the treatment of carved-out GFAs in the Balancing Authority Agreement and state that they have to evaluate the treatment of carved out GFAs before concluding the Balancing Authority consolidation negotiations.

467. Indianapolis P&L notes that the Commission has already required the Midwest ISO to comply with a readiness certification process. Indianapolis P&L requests that the Commission affirm that this requirement remains in effect and will be closely monitored by the Commission and NERC.

468. Wisconsin Electric asserts that, once the ERO certification and the Balancing Authority Agreement are executed, then the Midwest ISO should be required to lay out a plan to address issues associated with non-compliance with NERC performance standards for Balancing Authorities analogous to the Disturbance Control Standards, Control Performance Standards and the Balance Resources and Demand Standards.

469. ITC & METC urge the Commission to require the Midwest ISO to update its definition of Local Balancing Authority to include Joint Registration Organizations. This change would allow ITC & METC to qualify as Local Balancing Authorities.

c. Commission Determination

470. As we stated earlier, we accept the Midwest ISO proposal to file the ERO certification at least 45 days prior to the market start date. We clarify that the ERO readiness certification should be submitted as an informational filing. We also clarify that the Midwest ISO should conclude Balancing Authority Agreement negotiations 90 days prior to market start and submit a completed Balancing Authority Agreement prior to or along with the other certification requirements prior to market start in order to meet the proposed start date for the ASM.

471. We disagree with Southwestern regarding the time schedule for the Balancing Authority Agreement filing and point Southwestern to the Midwest ISO estimated time frame to submit the Balancing Authority Agreement.¹⁸³ With respect to Southwestern's

¹⁸³ Midwest ISO Proposal at 58.

concerns regarding Local Balancing Authorities maintaining certain reporting functions, we consider the Midwest ISO plan to become certified as the Balancing Authority to be reasonable and necessary to the central management of the ASM. While there may be different ways to share functions between the Balancing Authority and Local Balancing Authorities, this issue is a matter for negotiation between the current Balancing Authorities and the Midwest ISO. To the extent Southwestern has concerns regarding the costs of the final plan, it should raise those issues in stakeholder discussions.

472. In response to Hoosier & Southern Illinois' concerns regarding carved-out GFAs, we note that a recent Commission order addressed the treatment of carved-out GFAs going forward.¹⁸⁴ Therefore, Hoosier & Southern Illinois should have the information they need to conclude negotiations with the Midwest ISO on the Balancing Authority Agreement.

473. We agree with Wisconsin Electric that provisions are needed that address issues related to non-compliance with NERC performance standards for Balancing Authorities. We require the Midwest ISO to submit proposed provisions in a compliance filing to be submitted within 30 days of the date of this order.

474. We also agree with ITC & METC that Joint Registration Organizations should be added to the Midwest ISO definition of Local Balancing Authorities. We require that this tariff revision be filed in a compliance filing to be submitted within 30 days of the date of this order.

P. Business Practice Manuals

475. Section 38.1.5 of the proposed amendments to the TEMT provides that the Business Practice Manuals will be available for reference on the Midwest ISO's website.

1. Comments

476. Several commenters argue that the Midwest ISO fails to include important provisions defining the terms and conditions of service in its tariff, and instead only includes these provisions in its Business Practice Manual. Alcoa and the Midwest Transmission Customers contend that provisions relating to ASM implementation are missing from the proposed TEMT.

477. Alcoa asserts that the Midwest ISO is using certain Business Practice Manual provisions to impose onerous requirements upon demand resources. Alcoa contends that

¹⁸⁴ See 2007 GFA Order.

these requirements are unnecessary and constitute barriers to entry for demand resource participation in the ASM market. It notes that “[Business Practice Manuals] should conform to the terms of the [TEMT], rather than the other way around.” Alcoa urges the Commission to withhold final approval of the revised TEMT until the provisions are included in full and therefore subject to Commission review.

478. Alcoa also takes issue with several discrete provisions in the current drafts of the Business Practice Manuals. First, Alcoa finds fault with the two-second interval requirement for telemetry metering imposed on DRRs-II and the one-minute requirement imposed on DRRs-I as a condition of participating in the operating reserves market. Alcoa argues that the TEMT does not identify requirements for providing telemetered output data and there is no technical basis for the Midwest ISO’s contention that the data needs to be submitted at these frequencies. Second, Alcoa believes that the current draft of the Business Practice Manuals require that loads with behind-the-meter generation be commercially modeled and settled based on the *gross* load during periods in which those generators are committed, rather than on the *net* load, as is currently the case.

479. The Midwest Transmission Customers argue that the Commission should require the Midwest ISO to work with stakeholders to complete Business Practice Manuals prior to the ASM start. Relying on the Commission’s position in the recent California market redesign proceeding, the Midwest Transmission Customers argue that stakeholder involvement in Business Practice Manual development is important.

480. The Midwest TDUs argue that the proposed tariff’s language is “opaque” and “densely symbolic.” The Midwest TDUs request that the Commission direct the Midwest ISO to supplement the tariff with Business Practice Manuals that are synchronized to the tariff and elucidate the tariff’s provisions. The Midwest TDUs suggest that the Business Practice Manuals include, *e.g.*, numerical illustrations of how the Midwest ISO’s pricing operates in a given situation. The Midwest TDUs also assert that, in order to avoid a conflict between the Midwest ISO’s Business Practice Manuals and its filed rates, the Midwest ISO should file its Business Practice Manuals as section 205 compliance filings and the Business Practice Manuals should be given coordinate filed rate status.

481. NIPSCO argues that the new Business Practice Manuals should be scrutinized and verified against Midwest ISO’s proposed TEMT in order to avoid discrepancies between the TEMT and the Business Practice Manual. NIPSCO asserts that, to ensure adequate detection of such discrepancies, the Midwest ISO should be required to submit progress reports to the Commission showing the development of the Business Practice Manuals. Similarly, Ameren argues that the Midwest ISO’s ASM Business Rules cannot contradict its TEMT, that the TEMT trumps any conflicting Business Rules, and that any inconsistencies between the Business Rules and the TEMT should be addressed. Ameren also contends that the Midwest ISO should be required to certify that it has completed a

detailed review of its ASM Business Rules to ensure consistency with the TEMT, that it has eliminated all inconsistencies, and that it has informed stakeholders of any necessary changes to the ASM Business Rules or the TEMT.

482. WEPCO argues that the Business Practice Manuals are incomplete and WEPCO thus cannot comment on them. Because many of the processes to be articulated in the Business Practice Manuals have “settlement implications,” WEPCO requests that the Commission require the Midwest ISO to provide complete operating procedures and Business Practice Manuals to stakeholders and allow stakeholders at least 90 days to review the documentation.

2. Answers

483. In response to Ameren’s arguments regarding the ASM Business Rules, the Midwest ISO states that the Business Rules serve to “provide a mechanism to document the ongoing ASM design and to provide guidance to [s]takeholders and the Midwest ISO in developing the required changes to the [currently effective TEMT] to implement ASM.”¹⁸⁵ The Midwest ISO notes that the ASM Business Rules will no longer exist as a stand-alone document subsequent to ASM implementation.

484. The Midwest ISO also states that it is updating its Business Practice Manuals to be consistent with the proposed TEMT and is, in conjunction with stakeholders, conducting a review of the Business Practice Manuals.

485. In response to arguments that the Midwest ISO should be required to file its Business Practice Manuals with the Commission, the Midwest ISO relies on the Commission’s recent MRTU Order.¹⁸⁶ The Midwest ISO notes that, in that proceeding, the Commission rejected commenters’ requests that the California ISO be required to file its Business Practice Manuals with the Commission as part of the proposed changes to the California ISO’s tariff. Instead, the Midwest ISO points out that the Commission accepted the proposed revisions to the tariff and directed the ISO to work with stakeholders to develop its Business Practice Manuals.

486. The Midwest ISO disagrees with Alcoa’s assertion that gross load settlement is included in the Business Practice Manuals but omitted from the proposed tariff. The Midwest ISO argues that the relevant information can be found in its tariff. With respect to Alcoa’s demand metering arguments, the Midwest ISO agrees that a one-minute interval demand data requirement for DRRs-I should be included in the tariff.

¹⁸⁵ Midwest ISO Answer at 89.

¹⁸⁶ *Cal. Indep. Sys. Operator Corp.*, 116 FERC ¶ 61,274 (2006) (MRTU Order).

487. The Midwest ISO also states that if, as it works with stakeholders to develop its Business Practice Manuals, it discovers that any rate, terms, or conditions are identified in the Business Practice Manuals that are not included in the proposed tariff, the Midwest ISO will include them by filing an update with the Commission.¹⁸⁷

488. The Midwest ISO also reaffirms its commitment to complete its Business Practice Manuals in sufficient time for stakeholder input and review prior to ASM launch.¹⁸⁸ The Midwest ISO also notes that it is in the process of updating its Business Practice Manuals to reflect the provisions of the instant filing. The Midwest ISO also agrees to provide numerical examples, where needed, as part of the Settlements Business Practice Manual and other Business Practice Manuals, to explain complex calculations.

3. Commission Determination

489. In the MRTU order, the Commission stated that Business Practice Manuals serve as guides for internal operations and inform market participants of the [ISO's] practices. The information contained in the [Business Practice Manuals] is meant to provide further explanation of the [ISO's] practices *but not significantly affect any rates, terms, or conditions, consistent with the Commission's "rule of reason."*¹⁸⁹

490. Under our existing "rule of reason" policy, we see no reason to require the Midwest ISO to supplement its tariff with Business Practice Manuals that are synchronized to the tariff. To the extent the Business Practice Manuals contain greater detail than the tariff (*e.g.*, regarding eligibility criteria for DRRs), the greater detail supplements the tariff and does not override the tariff. Our policy is that only those practices that significantly affect rates, terms and conditions fall within the directive of section 205(c) of the FPA.¹⁹⁰ Moreover, as the Commission has recognized:

[T]here is infinitude of practices affecting rates and service. The statutory directive [of section 205(c)] must reasonably be read to require the

¹⁸⁷ Midwest ISO Answer at 93.

¹⁸⁸ *Id.*

¹⁸⁹ MRTU Order, 116 FERC ¶ 61,274 at P 1358 (emphasis added).

¹⁹⁰ See *Prior Notice and Filing Requirements under Part II of the FPA*, 64 FERC ¶ 61, 986 (1993) (discussing the Commission's jurisdiction over rates and charges that are "for or connected with" jurisdiction activities).

recitation of only those practices that affect rates and services significantly, that are *realistically* susceptible of speculation, and that are not so generally understood as to render recitation superfluous....^[191]

491. The Midwest ISO indicates that the Business Practice Manuals are still being updated to be consistent with the proposed tariff. The Midwest ISO also commits that, if any rate, terms or conditions are identified during the process that are not in its tariff, it will file an update with the Commission. Commenters' arguments that the Business Practice Manuals are incomplete are, therefore, premature at this time. However, we encourage the Midwest ISO to continue working with stakeholders to develop its Business Practice Manuals to ensure clarity and conformity with the Midwest ISO tariff.

492. The Midwest ISO correctly notes that the provisions cited by Alcoa regarding a two-second interval requirement for telemetry metering imposed on DRRs-II and a requirement of gross settlement for loads with behind-the-meter generation can be found in its TEMT. We disagree with Alcoa's assertion that these Business Practice Manual provisions conflict with the Midwest ISO's TEMT.

493. With respect to the one-minute interval demand data requirement for DRRs-I, which the Midwest ISO agrees should be included in its TEMT, we direct the Midwest ISO to submit revised tariff language that includes the demand data requirement. The Midwest ISO should submit this revision in a compliance filing to be submitted within 30 days of the date of this order.

494. Finally, if the Midwest ISO discovers that any rate, terms or conditions are identified in the Business Practice Manuals that are not included in the proposed tariff, it must file with the Commission an update to its tariff, as it has committed to do.

Q. Other Issues

1. Emergency Energy Purchases

a. Midwest ISO Proposal

495. The Midwest ISO proposes to allocate, on a pro-rata basis, the costs of emergency energy purchases¹⁹² to market participants with resource or load in the energy deficient

¹⁹¹ *Id.* at 61,988 (quoting *City of Cleveland v. FERC*, 773 F.2d 1368, 1376 (D.C. Cir. 1985)) (emphasis in original).

¹⁹² The Midwest ISO makes emergency energy purchases after it declares an emergency alert.

region that participate in the real-time energy and operating reserve market if they deviate from their day-ahead schedules for energy.

b. Comments

496. Ameren argues that the need to purchase emergency energy is a result of negative deviations, and resources with positive deviations should not be allocated these costs. Ameren further notes that the proposed tariff provision is a disincentive for resources to contribute excess energy into the market. Duke also recommends that the Midwest ISO consider ways to more precisely allocate responsibility based upon whether the deviations contribute to the emergency. Duke notes, for example, that in some circumstances a deviation could help or at least not contribute to the emergency (i.e., where the deviation occurs because of over-supply).

c. Answers

497. The Midwest ISO responds that the proposed allocation represents an existing allocation scheme and it will not commit to revising the proposal without stakeholder review and input.

d. Commission Determination

498. We agree with Ameren that the Midwest ISO proposal does not take account of cost causation principles and recognize that certain deviations, such as positive resource deviations, do not contribute to the need to make emergency energy purchases. Thus, we will require the Midwest ISO to provide, in a compliance filing to be submitted within 30 days of the date of this order, revised language that reflects cost causation principles.

2. Physical Capabilities In Offers

a. Midwest ISO Proposal

499. The Midwest ISO proposal includes tariff provisions that specify that the values in offers shall reflect the actual known physical capabilities and characteristics of both generating and demand resources.

b. Comments

500. Ameren argues that these requirements for day-ahead offers indicate that market participants cannot make changes to the hourly emergency and economic maximum limit unless certain exceptions are met, even if there is a change to the physical parameters of the resources. Ameren asserts that the day-ahead market is a financial-only market and while a market participant bears the financial consequences for changing limits, it must be allowed to alter physical unit limits as necessary. Wisconsin Electric requests

clarification that dispatch band limits and ramp rates can be specified with an hourly profile throughout the operating day.

501. Xcel questions the need for physical capability information for DRRs-I since these resources are not subject to must offer requirements and it is not clear how the capability of such demand resources would be determined.

c. Answers

502. In response to Wisconsin Electric, the Midwest ISO states that dispatch bands and ramp rates cannot be specified with an hourly profile throughout the operating day and that these operating parameters, once specified no later than 30 minutes prior to the hour, carry forward until changed.

503. In response to Xcel, the Midwest ISO notes that DRRs-I would become designated network resources subject to must offer requirements when they register as an alternative capacity resource and asserts that Xcel is questioning existing tariff language that applies to any resource.

d. Commission Determination

504. We note that the tariff has specified, since market start, that values in offers shall reflect the actual known physical capabilities and characteristics of resources, and that this requirement has applied to day-ahead market offers.¹⁹³ We find this requirement reasonable since market participants are submitting an offer curve up to the maximum capabilities of the resource, and the offer curve should represent accurate information on the physical characteristics of the unit. Therefore, we do not consider the maximum limits of a resource to be a non-binding or financial estimate.¹⁹⁴

505. We understand Ameren's concern to be that it be allowed to specify a different hourly emergency or economic maximum limit in the real-time offers than was used in the day-ahead offers. We find nothing in the tariff that would not allow Ameren to make

¹⁹³ We do not consider it necessary to define actual known physical capabilities, as recommended by Reliant and Dynegy, since those parameters are specified in section 39.2.5 of the TEMT.

¹⁹⁴ Underlining our concern with respect to the potential for physical withholding in ancillary services markets, we encourage market participants to base their offers on true physical capabilities of their resources. Offer curves based on inaccurate physical capabilities can result in the Midwest ISO obtaining other resources on short notice and at a higher cost.

such a specification, so long as the change is based on the actual known physical capabilities of the resource. However, we would expect the physical capabilities of a resource to be unchanged, for the most part, and revisions in the capabilities would be rare and small. We note that the value in offer provision on sheet number 555Z.04 refers to offer information in section 40.2.3.b of the Midwest ISO tariff that no longer has offer information. We require the Midwest ISO to revise this reference and include it in a compliance filing to be submitted within 30 days of the date of this order.

506. Similarly, we agree with the Midwest ISO's response to Wisconsin Electric, which states that dispatch band limits and ramp rates cannot be specified on an hourly profile throughout the operating day, and therefore the limits and ramp rates, once specified, carry forward until changed. As discussed above, we expect that the physical characteristics of resources provided by market participants to the Midwest ISO are the true capabilities of the facilities and therefore represent the actual operating limits and ramp rates of the resources. Otherwise, the Midwest ISO cannot maintain reliability with accurate information, to the detriment of system reliability. Wisconsin Electric provides no explanation for why physical characteristics of resources, such as operating limits and ramp rates, would change on an hourly basis and, therefore, in consideration of the reliability impacts of changing operating parameters, we consider the Midwest ISO offer rules to be reasonable.

507. With respect to Xcel's argument, we agree that the physical capabilities of DRRs-I are not relevant to their offers.¹⁹⁵ Rather, the relevant data for DRRs-I are the load characteristics of the host load, and the need to ensure the targeted reduction is an amount less than the host load. These factors are more relevant to the offers of DRRs-I, as discussed elsewhere in this order, and therefore there is no need for physical capability information for DRRs-I. We require the Midwest ISO to revise its tariff accordingly in the compliance filing to be submitted within 30 days of the date of this order.

3. Minimum Run Times

a. Midwest ISO Proposal

508. The Midwest ISO proposal includes tariff provisions requiring that quick-start resources must have minimum run time of 180 minutes or less in order to be classified as supplemental qualified resources.

¹⁹⁵ As explained in Roy Jones' testimony, DRRs-I can only provide two discrete MW outputs: zero and the targeted demand reduction level. Roy Jones Test. at 51.

b. Comments

509. Ameren contends that no resource should be excluded due to a minimum run time parameter and the maximum run time should be 60 minutes or greater. Ameren asserts that the use of a minimum run time of 180 minutes or less could deprive the market of viable quick-start resources.

c. Answers

510. The Midwest ISO responds that a quick-start resource with a longer minimum run time may have lower deployment costs and that an open-ended minimum run time could cause an unjustified increase in real-time RSG charges if deployed. Ameren responds by disagreeing that its proposal will result in open-ended run times and maintains that its proposal will best minimize costs and increase flexibility and reliability in the market. In the event the Commission approves the Midwest ISO proposal, Ameren recommends that the Midwest ISO be required to provide an evaluation after 180 days to ensure the run time limitations are justified.

d. Commission Determination

511. On the expectation that the Midwest ISO has evaluated the impact of its minimum run time parameters on the availability of supplemental reserves and the impact on reliability and has found no threat to reliability, we find the Midwest ISO position that it must manage costs to be a reasonable consideration in setting run time parameters and therefore accept this tariff provision.¹⁹⁶ However, in recognition of the importance of this issue for balancing reliability needs with cost management requirements, we require the Midwest ISO to provide a report in the six-month informational filing required by this order that provides an assessment of the impact of the minimum run time requirements on reliability and costs, and, if appropriate, proposed revisions to its procedures.

4. Contingency Reserve Deployment Procedures**a. Midwest ISO Proposal**

512. The Midwest ISO's proposal is that it will simultaneously deploy contingency reserves on all on-line resources not yet deployed in a manner that minimizes the deployment response time to ensure compliance with the applicable Disturbance Control

¹⁹⁶ We note that the cost allocation concern raised by Ameren with respect to make-whole payments was already decided in other Commission proceedings and is beyond the scope of this proceeding. *See Midwest Indep. Transmission Sys. Operator, Inc.*, 117 FERC ¶ 61,325 (2006).

Standard and that after a deployment instruction is issued a resource has 10 minutes to deploy its contingency reserves. The Midwest ISO also proposes that after it has issued a contingency reserve deployment instruction, the contingency reserve requirement may be temporarily reduced by the amount of the deployment and then ramped back up after the disturbance has been resolved and system conditions are in compliance with the applicable Reliability Standards. A contingency reserve deployment instruction applies to those resources with cleared contingency reserves and it is for a specific MW quantity communicated via set-point instructions or other electronic means.

b. Comments

513. Several commenters have concerns with respect to the manner in which the Midwest ISO proposes to deploy contingency reserves.¹⁹⁷ Wisconsin Electric asserts that the deployment period for contingency reserves should be 15 minutes because the 10-minute period proposed in the tariff is too short.¹⁹⁸ Ameren is unclear how the Midwest ISO intends to minimize deployment response time if all resources must be capable of responding within 10 minutes. Midwest Transmission Customers assert that the term “may” should be replaced with “shall” so that this action is not discretionary.

514. Ameren also disputes that the deployment selection criteria should be a function of time and not economics meaning that the Midwest ISO should seek to minimize the total deployment cost.

c. Answers

515. The Midwest ISO responds that it will continue to clear contingency reserves during a contingency reserve deployment event but not to the extent that it would cause a contingency reserve scarcity, and therefore it considers the proposed language to be acceptable.¹⁹⁹ Regarding contingency reserve deployments, the Midwest ISO answers that, with any deployment request, it is proposing to simultaneously deploy contingency reserves on all on-line resources with cleared contingency reserves to ensure compliance with Disturbance Control Standards, achieve maximum response time, and minimize the chance of failure should a resource not be able to perform as offered.

¹⁹⁷ *E.g.*, Wisconsin Electric Comments at 18.

¹⁹⁸ *See* Midwest ISO, FERC Electric Tariff, Module A, Third Revised Sheet No. 57 at § 1.39c (Contingency Reserve Deployment Period).

¹⁹⁹ Midwest ISO Answer at 80.

516. Ameren responds that the Midwest ISO's proposal is excessive and will lead to extra market costs. Ameren asserts that the Midwest ISO should only deploy the amount of on-line resources necessary to address the contingency, and do so at least cost.

d. Commission Determination

517. We will not restrict the flexibility of the transmission provider to manage reliability of the system during contingency events and, therefore, we will not require any revision to the tariff provisions governing contingency reserve deployment instructions or sequence. As the independent system operator, it is appropriate and necessary that the Midwest ISO be able to plan for the largest contingencies possible on its system, including the possibility that resources may not be able to meet their offers. The Midwest ISO is in a unique position, in that only it can see the entire grid and only it has data on the entire resource composition and their response times respectively.

518. In addition, the Midwest ISO has given a reasonable explanation for its required contingency reserve response time.²⁰⁰ We note that contingency reserves will reflect economics, as the market-wide contingency reserve requirement will meet all applicable reliability standards at least cost as expressed in the Midwest ISO's testimony.²⁰¹ The real-time market-wide contingency reserve requirement follows the corresponding requirements set by the Midwest ISO in the day-ahead market.²⁰² We reiterate that reliability is the paramount purpose behind the procurement of contingency reserves and the Midwest ISO has proposed an appropriately conservative approach for its procedures to plan for all foreseeable system events.

²⁰⁰ See Roy Jones Test. at 52 (“For example, if Applicable Reliability Standards require full recovery from a forced Resource outage, or other unexpected events that could impact reliability within 15-minutes, and a 5-minute notification time is required after the forced outage to implement Contingency Reserve Deployment, then the Contingency Reserve Deployment Period would be set to 10 minutes.”).

²⁰¹ *Id.* (“The Midwest ISO Market-Wide Contingency Reserve requirement will be established daily to comply with Applicable Reliability Standards at least cost.”); see also Midwest ISO, FERC Electric Tariff, Original Sheet No. 482B. We also note that section 39.2.1b specifies that the contingency reserve product requirements will be set “in an economic manner.”

²⁰² See Midwest ISO, FERC Electric Tariff, Third Revised Sheet No. 544 at § 40.2.3.b (Market-Wide Contingency Reserve Product Requirements).

5. Contingency Reserve Sharing Group (CRSG) Agreement

519. The CRSG is an agreement resulting from the termination of several reserve sharing groups in the Midwest ISO footprint. This agreement was conditionally accepted on October 26, 2006,²⁰³ and a subsequent compliance filing was accepted on December 21, 2006 (Midwest ISO CRSG Agreement).²⁰⁴ The parties to this agreement include both Midwest ISO members and non-Midwest ISO members such as WAPA.

a. Midwest ISO Proposal

520. The Midwest ISO proposal states that since all of the existing balancing authorities will ultimately be consolidated into the Midwest ISO Balancing Authority, the Midwest ISO CRSG Agreement will have to either be modified or superseded. The Midwest ISO has initiated discussions with both the existing Balancing Authorities within the Midwest ISO region as well as the external Balancing Authorities that are signatories to the Midwest ISO CRSG Agreement to address required modifications and the terms of a superseding agreement. Upon resolution of this proceeding, therefore, the Midwest ISO expects that it will be making future filings in order to assure that the terms and conditions of the Midwest ISO CRSG Agreement are in compliance with the new Balancing Authority and tariff structure.

b. Comments

521. WAPA asserts that it hopes the CRSG will continue with a modified agreement after the start of the ASM. Under current CRSG provisions, non-Midwest ISO members can supply spinning and supplemental reserves without fear that these reserves will be curtailed during a Transmission Load Reduction. WAPA expects the same treatment in the ASM.

c. Commission Determination

522. This issue is best resolved in stakeholder discussions. We encourage the Midwest ISO to continue discussions with parties regarding the implications of a transition to an ASM for the Midwest ISO CRSG Agreement and thereby ensure a smooth transition. We require the Midwest ISO to provide an update on these discussions, among the parties to the existing CRSG, in a compliance filing to be submitted within 30 days of the date of this order.

²⁰³ *Midwest Indep. Transmission Sys. Operator, Inc.*, 117 FERC ¶ 61,092 (2006).

²⁰⁴ Delegated Letter Order Accepting Compliance Filing, Docket No. ER06-1420-001 (issued December 21, 2006).

6. Applicable Reliability Standards

523. The definition of spinning and supplemental reserves states that these reserves must meet any Applicable Reliability Standard. Ameren recommends that the phrase be reworded to state that these reserves will meet all Applicable Reliability Standards that apply to the Midwest ISO Balancing Authority. To ensure that the definition of Applicable Reliability Standards is as clear and specific as possible, we require the Midwest ISO to revise, in a compliance filing to be submitted within 30 days of the date of this order, the definition as follows:

Applicable Reliability Standards: Reliability Standards approved by the Federal Energy Regulatory Commission (FERC) under section 215 of the Federal Power Act relating to operation of the Transmission Provider in carrying out its Reliability Coordinator, Balancing Authority, Market Operator, Transmission Service Provider, and Planning Coordinator functions. In addition to FERC approved standards any regional reliability criteria and/or standards relating to operation of the Transmission Provider in carrying out the functions listed above.

524. With respect to Ameren's concerns, we agree that "any" should be revised to "all" in sections 1.291e and 1.295b of the Midwest ISO's tariff, and require that this revision be included in the compliance filing to be submitted within 30 days of the date of this order.

7. Calculation of Day-Ahead Marginal Losses Surplus

525. Ameren argues that the credits for day-ahead energy and operating reserve markets are incorrectly specified in the Midwest ISO proposal since they are derived by subtracting export schedules. Ameren argues that the credits should instead specify subtraction of import schedules. We note that the Midwest ISO has provided no explanation as to why it is revising the marginal loss calculations to include exports and imports, and we find no connection between that revision and the proposed ASM. Therefore, we reject those changes without prejudice to the Midwest ISO making a future section 205 filing to justify its proposed revision.

8. Resource Commitment Procedures

526. Ameren recommends that the Midwest ISO develop procedures that allow for the expansion of the Day-Ahead Margin Assurance Payment process in Schedule 27 to allow de-commitment of units cleared in the day-ahead markets when they are not needed in the real-time market due to market conditions. Ameren asserts that the Midwest ISO, with proper notice, could remove the start for a day-ahead cleared unit indicating the unit is not needed in the real-time market and the Midwest ISO would ensure that the unit

receives its day-ahead margin utilizing the day-ahead assurance payment. We consider this issue to be beyond the scope of this proceeding and encourage the Midwest ISO to continue discussions on this issue with stakeholders.

9. Seams Issues

527. Indianapolis P&L contends that the Commission should require the Midwest ISO, PJM and SPP to examine whether changes are needed to their joint operating agreements and, if so, that such changes should be filed and approved by the Commission prior to ASM start-up. Indianapolis P&L also asserts that the Commission should ensure that the new market design does not make participation by non-members more difficult since greater participation by sellers outside the footprint increases liquidity and enhances market outcomes. We expect that the Midwest ISO has been evaluating the impact of its proposed ASM on its joint operating agreements and will apprise the Commission of any revisions that are required in the course of submitting its readiness reports prior to market start. We also expect that the Midwest ISO has been evaluating the impact of its proposal on non-market members, as indicated by its proposals for external resources, and will apprise the Commission of provisions that need our approval.

10. Shadow Settlement and Dispute Resolution

528. Hoosier & Southern Illinois assert that the complexity of the proposed ASM design will make shadow settlement and dispute resolution difficult and therefore deprive customers of the ability to obtain redress via complaints, as guaranteed by section 206 of the FPA, if the Midwest ISO tariff is improperly applied.

529. We consider the Midwest ISO's commitment to make appropriate information available for shadow settlement purposes and the inclusion of shadow settlement information in the Business Practice Manuals to be responsive to the concerns of Hoosier & Southern Illinois and therefore we do not require the Midwest ISO to take any additional action.

11. Opportunity Cost Impacts

a. Midwest ISO Proposal

530. The Midwest ISO proposes to procure operating reserves based on the offers provided by resources. The Midwest ISO also proposes to pay operating reserves based on the offer price of the marginal resource, or market clearing price, and the opportunity cost of the resource. The opportunity cost represents the price the resource would have received if it provided energy instead of operating reserves.

531. At the close of the day-ahead markets, the Midwest ISO undertakes a reliability assessment commitment to obtain additional energy and operating reserve supplies

deemed necessary to meet load requirements in the real-time market, based on the latest load forecast estimates. The reliability assessment commitment process minimizes costs based on the cleared offer prices of resources and does not consider opportunity costs.

b. Comments

532. Southwestern argues the Midwest ISO proposal to ensure the recovery of both operating reserve offer costs and opportunity costs is contrary to Commission precedent since it represents “and” pricing that the Commission has disallowed.

533. Ameren asserts that the security constrained economic dispatch will not consider opportunity costs when clearing or dispatching operating reserves, thereby leading to excessive uplift from resources being cleared and dispatched, and therefore recommends the security constrained economic dispatch should be designed to consider opportunity costs as a condition for implementing the ASM. Ameren explains that excessive uplift can occur since operating reserves will be chosen due to low operating reserve offers while these same resources have a high opportunity cost. Ameren provides examples showing how security constrained economic dispatch will set low clearing prices, and these clearing prices do not recover the full cost of providing the service, including opportunity costs, and therefore the resources must be made whole via an uplift payment. Ameren further notes that if market participants try to add the opportunity cost into the ancillary availability offer to ensure the security constrained economic dispatch has the correct clearing price, the security constrained unit commitment will potentially not clear the unit because of the higher opportunity cost in the offer.

534. Ameren also objects to the reliability assessment commitment objective function since it only minimizes total capacity costs but does not recognize the capability of the units to provide ancillary services and economic energy. According to Ameren, the reliability assessment commitment objective function analysis results in additional resources being committed that result in increased RSG charges. Ameren therefore recommends work begin on this issue upon completion of ASM implementation.

c. Answers

535. While noting that minimizing opportunity costs are typically not part of the objective function of economic optimization, the Midwest ISO interprets Ameren’s real concern to be that market clearing prices may not always guarantee recovery of opportunity costs. The Midwest ISO expects that the security constrained economic dispatch will generate prices that ensure market participants recover their offer and opportunity costs as long as there are no physical constraints that prohibit the resource from operating at the optimum output level. However, if a minimum limit forces a resource to operate with an incremental cost that exceeds the marginal cost, the resource would not recover even the offer costs, resulting in RSG costs. The Midwest ISO

explains that this circumstance and the illustration provided by Ameren also implicating a physical constraint are well-known issues and are the subject of ongoing research and development efforts.

536. Ameren responds by noting that the Midwest ISO answer does not allay its concerns and therefore recommends the Commission require the Midwest ISO to provide and commit to a firm schedule for correcting the flaws identified in its comments prior to market start-up.

d. Commission Determination

537. We do not consider the Midwest ISO proposal to represent “and” pricing, and therefore we do not consider the proposal to be contrary to Commission precedent. “And” pricing pertains to rate designs where the customer pays for the same costs twice: as part of an embedded rate and again as an incremental rate. In contrast, the instant proposal allows suppliers of ancillary services to be paid their offer price in the reserve markets and an opportunity cost that represents the offer price the supplier would have received if it offered in the energy markets. Such a market-based opportunity cost does not guarantee over-recovery of embedded costs, and is instead designed to provide an incentive for resources to bid into reserve markets with the knowledge that they will not be penalized with a loss of energy market revenues because of their decision to bid into the reserve markets.²⁰⁵

538. With respect to the security constrained economic dispatch process issues raised by Ameren, we recognize that the clearing of reserves results in two shortcomings: (1) the process may not clear reserves efficiently when higher cost units are chosen due to the optimization algorithm; and (2) the process may result in higher RSG costs because resources are not recovering their offer costs in the market price. We agree with Ameren that these are serious concerns that compromise the integrity of the co-optimization process and exacerbate the high RSG costs that have been of concern since market start. Accordingly, we require the Midwest ISO to submit to the Commission a progress report in an informational filing to be submitted six months after market start and in six-month intervals until resolution, detailing the Midwest ISO plan to address the identified issues and the steps it is taking to resolve these issues.

²⁰⁵ We note that Southwestern proposes to modify the pricing of the ASM with other embedded cost rate design concepts, such as defining opportunity costs as energy margins above fuel and operating costs. We do not consider such concepts appropriate for market-based rates.

12. Price Volatility Make-Whole Payments

a. Midwest ISO Proposal

539. According to the Midwest ISO, the Price Volatility Make-Whole Payment (PV MWP) is designed to protect from financial harm generators that provide dispatch flexibility, follow their dispatch instructions, and, in doing so, incur losses due to the differences that arise between the ex ante, five-minute prices used to dispatch units and the ex post, hourly market prices used to settle the markets.²⁰⁶ In order to address potential gaming to increase their PV MWP, suppliers must satisfy certain eligibility criteria in order to receive the payments. While these payments were accepted by the Commission,²⁰⁷ the payments have not been made effective due to software delays.

540. As part of its ASM proposal, the Midwest ISO proposes to split the PV MWP into two components: the Real-Time Offer Revenue Sufficiency Guarantee Payment will apply to suppliers dispatched above their day-ahead schedules either economically or through manual redispatch; the Day-Ahead Margin Assurance Payment will apply to affected suppliers dispatched below their day-ahead schedules. In general, the design of the payments (including the applicable eligibility criteria) is similar to the Commission-accepted, but yet to be implemented, PV MWP program. The Midwest ISO proposes to make both payments effective June 1, 2008 in the place of the PV MWP.²⁰⁸

b. Technical Conference Comments

541. The Midwest ISO explains that unforeseen gaming strategies could be used to extract excessive Real-Time Offer Revenue Sufficiency Guarantee Payments and Day-Ahead Margin Assurance Payments that are not addressed by the eligibility criteria. To address these potential gaming strategies, the Midwest ISO proposes to revise its market monitoring and mitigation plan to include the Real-Time Offer Revenue Sufficiency Guarantee Payment and Day-Ahead Margin Assurance Payment programs. Specifically, the Midwest ISO proposes that the IMM will monitor whether behavior identified in sections 63.3.a through 63.3.c of the Midwest ISO's tariff, including physical

²⁰⁶ The PV MWP is designed to prevent a supplier from receiving both a revenue sufficiency guarantee payment and the PV MWP.

²⁰⁷ *Midwest Indep. Transmission Sys. Operator, Inc.*, 117 FERC ¶ 61,325 (2006), *reh'g denied*, 119 FERC ¶ 61,176 (2007).

²⁰⁸ We note that in Docket No. ER08-416-000, the Midwest ISO proposes to implement the provisions of the PV MWP applicable to manually redispatched units, now called the Manual Redispatch Make-Whole Payment, effective February 1, 2008.

withholding, economic withholding, and uneconomic production, are being used to extract excessive payments. To evaluate any such behavior, the IMM will then apply the thresholds identified in section 64 of the tariff, or other thresholds the IMM deems appropriate. If the behavior exceeds the relevant thresholds, the Midwest ISO proposes that the IMM recommend to the Commission that it remove the eligibility of the supplier to receive payments.

542. The Midwest ISO explains that it does not propose to impose mitigation measures (i.e., substitute a supplier's offer with its applicable reference level) because it does not anticipate that the conditions of local market power will enable a generator to extract excessive Real-Time Offer Revenue Sufficiency Guarantee Payments or Day-Ahead Margin Assurance Payments. However, if a supplier is mitigated due to its impact on market prices or other make-whole payments, the generator would no longer meet the eligibility criteria for the Real-Time Offer Revenue Sufficiency Guarantee Payment and Day-Ahead Margin Assurance Payment.

c. Commission Determination

543. The proposed Real-Time Offer Revenue Sufficiency Guarantee Payment and Day-Ahead Margin Assurance Payment have extensive eligibility criteria that, according to the Midwest ISO, are designed to address known potential gaming strategies.²⁰⁹ To the extent that the Midwest ISO has identified other, unforeseen gaming opportunities, however, we find that the Midwest ISO needs to consider the appropriate level of monitoring, mitigation and/or sanctions needed to complement the eligibility criteria for these payments. We note that the proposed revisions to the Midwest ISO's market monitoring and mitigation plan do not directly address the Day-Ahead Margin Assurance Payment and Real-Time Offer Revenue Sufficiency Guarantee Payment.

544. We will direct the Midwest ISO to clarify, in a compliance filing to be submitted within 30 days of the date of this order, its monitoring and mitigation plan for the Real-Time Offer Revenue Sufficiency Guarantee Payment and Day-Ahead Margin Assurance Payment, including: (1) the types of behavior that the IMM will monitor for, including which markets are relevant to manipulation of these payments; (2) the types of impacts the IMM should monitor, including whether it will consider only the effects on the Day-

²⁰⁹ We note that it may be appropriate at the initiation of the Day-Ahead Margin Assurance Payment and Real-Time Offer Revenue Sufficiency Guarantee Payment programs to have fairly strict eligibility criteria, as proposed by Midwest ISO, along with monitoring and mitigation. However, as the Midwest ISO and IMM gain experience with the programs, appropriate monitoring and mitigation may allow the Midwest ISO to lighten the eligibility criteria in order to allow more market participants to participate in the programs.

Ahead Margin Assurance Payment and Real-Time Offer Revenue Sufficiency Guarantee Payment themselves, or additional effects on market prices and/or RSG payments; (3) whether monitoring and any mitigation would occur only when there is a binding constraint; (4) whether mitigation would apply only within constrained areas, such as BCAs, NCAs, and/or constrained reserve zones; (5) the specific BCA and/or NCA thresholds that will apply, including any substitute or additional thresholds; (6) the circumstances when any substitute or additional thresholds would apply; and (7) whether the IMM may apply any mitigation or sanctions in response to gaming activities. We note that care must be taken with any mitigation to ensure that the behavior in question is objectively identifiable. We will require the Midwest ISO to include any appropriate tariff modifications to incorporate its clarifications in the compliance filing to be submitted within 30 days of the date of this order.

R. Treatment of Pending and Future EMT Filings

545. The Midwest ISO filing overlays the tariff amendments in the instant proposal on previously filed tariff amendments that are pending as of the date of the filing, but which have not been accepted by the Commission. The previously filed tariff amendments include compliance filings directed by the Commission as well as section 205 filings proposed by the Midwest ISO.

1. Comments

546. Integrys asserts that the Midwest ISO has failed to provide justification for including in the instant filing a host of unrelated tariff revisions that are currently pending before the Commission. Integrys therefore recommends that the Commission reject the extraneous tariff revisions as deficient. Integrys also claims that Commission acceptance of the extraneous tariff changes would have the unintended effect of implementing tariff revisions that the Commission has not yet approved or allowed to go into effect. Midwest ISO TOs express concern that pending tariff revisions to another proceeding included in the ASM filing may be accepted through a Commission order on the ASM filing and therefore recommend that the Commission make clear it is not accepting these other tariff revisions. Ameren notes that the filing includes rejected, pending and unapproved tariff provisions that should not be included in this filing. The Midwest ISO responds that the large number of tariff changes makes it an administrative burden to submit its filings in any other manner and indicates that it will address the issue in a future clean-up filing prior to implementation of the ASM.

2. Commission Determination

547. To ensure there is no confusion on which tariff provisions the Commission is accepting in this proceeding, we reject all provisions in the Midwest ISO filing that represent tariff revisions filed in other proceedings pending as of the date of the ASM filing that have not been accepted (or have been rejected) by the Commission. In a

compliance filing to be submitted within 30 days of the date of this order, we require the Midwest ISO to identify and redact any provisions that are pending in other proceedings and to file only those provisions accepted in this order and proposed revisions submitted in compliance with this order.

S. Revenue Sufficiency Guarantee Costs

1. Midwest ISO Proposal

548. The Midwest ISO proposes to modify the day-ahead RSG charge by applying the charge to operating reserve schedules and basing the real-time RSG charge on resource and load deviations associated with operating reserves. The Midwest ISO proposes to add any excessive energy and/or deficient energy to the calculation of the RSG charge.

2. Comments

549. Wisconsin Electric contends that using real-time reserves data to settle all reserves charges disrupts the day-ahead and real-time RSG processes since moving day-ahead reserves out of the day-ahead market will result in a higher day-ahead RSG charge while the real-time RSG charge will be based on the full reserve quantities. Wisconsin Electric asserts the Midwest ISO should justify this link between day-ahead and real-time markets. Wisconsin Electric also recommends that generators be exempt from RSG charges due to deviations in compliance with the direction of the transmission provider during declared emergency conditions, in the same way load, import and export deviations are exempt in these circumstances.

550. Hoosier & Southern Illinois assert that while any resource may cause RSG costs to be incurred for failing to follow instructions, the tariff provision assessing the RSG charge only applies to market participants that withdraw energy. They contend that the distinction between market participants that withdraw energy and market participants that do not withdraw energy is unrelated to the manner in which RSG costs are incurred and therefore the assessment of RSG charges only to market participants that withdraw energy is unjust and unreasonable and contrary to cost causation. The Midwest TDUs state that it is unreasonable to accept the Midwest ISO's RSG amendments in this proceeding and not fix other problems with the applicability of the RSG provisions to market participants that actually withdraw energy. The Midwest ISO TOs recommend the Commission direct the Midwest ISO to submit RSG informational filings every six months.

3. Answers

551. The Midwest ISO answers that operating reserve requirements are specified in advance and will not vary between the day-ahead and real-time markets unless unforeseen operating conditions or events occur after the day-ahead markets close.

Therefore, the overall settlement of operating reserves will generally take place within the day-ahead markets and the real-time market will be limited to cleared operating reserve deviations, according to the Midwest ISO. The Midwest ISO further explains that the costs of procuring operating reserves in each market to all physical load and, if applicable, export schedules, avoids free rider issues if load and export schedules could avoid all or a portion of their operating reserve charges by not bidding into the day-ahead markets.

4. Commission Determination

552. We understand Wisconsin Electric's concern to be that the Midwest ISO proposal will add operating reserve costs to the costs eligible for recovery in the day-ahead RSG charge and thereby increase the charge since there is not a commensurate increase in the volumes to which the charge is applied. We do not consider such an outcome likely since the experience to date in the Midwest ISO energy markets has been that day-ahead scheduling has not been a factor in causing RSG costs to be incurred. As the Midwest ISO explains, those factors that could increase RSG costs for operating reserves will occur after the day-ahead market closes. We agree with the Midwest ISO that it is reasonable to include resource and load deviations associated with operating reserves in the real-time RSG charge, in the same way energy market deviations are included in the current RSG charge.

553. With respect to exemptions from RSG charges during emergency conditions for generators, the Midwest ISO proposal exempts generators from excessive/deficiency deployment charges in these situations and therefore the excessive and deficient energy components of the RSG charge would not reflect excessive or deficient energy generated in these conditions. We find this exemption appropriate and consistent with the treatment of load, exports and imports.

554. We find the issue of the definition of market participants liable for RSG costs to be beyond the scope of this proceeding and note that the allocation of RSG costs is being evaluated by the Commission in other proceedings in Docket Nos. ER04-691, EL07-88, EL07-92 and EL07-96. We also consider the request for informational filings to be beyond the scope of this proceeding and encourage the Midwest ISO to provide RSG cost information to market participants in stakeholder discussions.

T. Miscellaneous Tariff Provisions

555. Parties raise a number of other issues with respect to the proposed tariff provisions, which we address below by tariff section. We require the Midwest ISO to submit additional tariff revisions in a compliance filing to be submitted within 30 days of the date of this order to address the following issues:

1. **Section 1.103a, Forecasted Peak Load:** The definition of this term is the estimated peak load of an LSE based upon analysis of predicted incremental load growth. We agree with Ameren that the definition needs more specificity as to the basis for the forecast and the applicable time frame of the estimate.
2. **Section 1.121, Generation Resource:** The definition of this term should be clarified as requested by Duke and agreed to by the Midwest ISO in its answer.²¹⁰
3. **Section 1.240, Physical Scheduling Software:** This term needs to be re-inserted into the tariff.
4. **Sections 40.2.6 and 40.2.20, Treatment of Alternative Capacity Resources:** Ameren asserts these tariff provisions relating to treatment of alternative capacity resources do not provide a description of how these resources will be identified, selected and deployed. The Midwest ISO response proposes revisions to section 40.2.20.b.ii, part (c), a section that does not exist in the tariff. We require the Midwest ISO to clarify its response.
5. **Section 40.2.8, Self-Scheduled Resources:** Ameren argues the Midwest ISO should allow off-line quick-start resources to provide self-scheduled supplemental reserves, and notes this provision does not address this circumstance. We require the Midwest ISO to clarify that off-line quick-start resources can provide self-scheduled supplemental reserves, or if not, provide its justification for prohibiting their participation.
6. **Section 40.2.19, Real-Time Revenue Sufficiency Guarantee:** We agree with Ameren that the Midwest ISO should revise the provision to indicate resource costs will be compared to revenues from energy and operating reserves, rather than just energy as in the proposed tariff.
7. **Section 40.3.3, Real-Time Energy and Operating Reserve Market Settlement Calculations:** We agree with Duke and Xcel that the terms “Real-Time Financial Schedules” and “Regulation Deployment Instruction” need to be defined.

²¹⁰ See Midwest ISO Answer at 79.

8. **Section 52.3.a.ii, Responsibilities of the IMM:** We require the Midwest ISO to remove the reference to “reliability” in section 52.3.a.ii. We note that the Commission previously directed the Midwest ISO to remove this reference.²¹¹
9. **Sections 64.1.2.a.iii and 64.1.2.a.iv:** We note that the proposed conduct thresholds for economic withholding in the ASM are given in these sections. However, section 64.1.2.b states that those thresholds are applicable only in BCAs, not NCAs. We require the Midwest ISO to submit tariff revisions to clarify the conduct threshold for economic withholding in NCAs for the ASM.
10. **Attachment L, Credit Policy, Sheet 1232.01:** We agree with Ameren that the revised definition on this sheet also needs to be applied to the Day-Ahead Energy Measured Exposure to ensure consistency and a complete definition.
11. **Schedule 27.B, Sheet 1050Z.12:** We agree with Wisconsin Electric that the last sentence should be “Demand Response Type - II.” [Wisconsin Electric 21]

556. We find that the Midwest ISO’s responses to certain tariff language issues are acceptable and require the Midwest ISO to file its proposed tariff revisions for the tariff sections listed in Appendix B in a compliance filing to be submitted within 30 days of the date of this order. We expect the Midwest ISO to file these revisions along with its corrections of typos in its tariff.

557. We find that the Midwest ISO does not need to make revisions to the following tariff sections:²¹²

1. **Sections 1.18b and 1.18c, Baseline Reliability Projects and Study:** We will not require the re-organization of these provisions proposed by ITC&METC since the proposed re-organization deletes certain provisions that relate to issues beyond the scope of this proceeding.

²¹¹ *Midwest Indep. Transmission Sys. Operator, Inc.*, 119 FERC ¶ 61,196, at P 21 (2007).

²¹² We note the definition changes requested by Wisconsin Electric regarding FTR and ARR definitions are beyond the scope of this proceeding.

2. **Section 1.21, Bilateral Transactions:** We will not require the definition be revised to include bilateral transactions resulting from bilateral contracts as recommended by Southwestern. The proposed definition provides a complete list of the specific schedules resulting from bilateral transactions (interchange schedules, dynamic interchange schedules, financial schedules and GFA schedules) that will occur in the energy and ancillary services markets and therefore further revisions are not needed.
3. **Section 1.30, Capacity:** We will not require revisions to this definition as recommended by Southwestern. The definition is clear that it represents an instantaneous measure, in MW, and the energy definition is clear that it represents a measure over time, in MWh, and therefore there is no inconsistency between the definitions.
4. **Section 1.35a, Competitively Sensitive Information, Section 1.37, Confidential Information, and Section 38.9.1, Confidentiality:** We will not adopt the recommendation of Southwestern to make data in support of ancillary services prices public. Such information would have anti-competitive effects and would provide an unfair competitive advantage and therefore should be kept confidential.
5. **Section 1.153a, Interruptible Load:** We will not require the definition to be revised to state that interruptible loads will be subject to curtailment or interruption in case of scarcity or emergency, as recommended by Southwestern. As the Midwest ISO notes, section 40.2.20.ii is the appropriate section to detail curtailment and interruption procedures during scarcity and emergency conditions.
6. **Section 30.8.a, Price Volatility Make-Whole Payment:** We find no need to revise this section, as recommended by Ameren, since the Midwest ISO has revised the price volatility make whole payment designation to the real-time offer revenue sufficiency guarantee payment and day-ahead margin assurance payment, as proposed in the application.²¹³
7. **Section 39, Day-Ahead Energy and Operating Reserve Market Processes and Settlements, and Section 40.2, Real-Time Energy and Operating Reserve Market:** We find no need to revise these revisions to state that the locational marginal price and market clearing price are greater

²¹³ Southwestern's recommendation to reject this provision is beyond the scope of this proceeding.

than the corresponding energy and reserve offers, as Ameren recommends, since these provisions already make that statement.

8. **Section 39.1.2, Rules for Self-Scheduled Resources:** In response to Ameren's concern that a resource should not have its schedule reduced below the minimum economic limit of the unit, we find this tariff provision to be clear that reductions cannot violate the resource limits and therefore further revisions are not necessary. We also find the Midwest ISO's answer to Xcel to be responsive to their concerns.
9. **Section 39.2.1B.a, Resource Requirements for Operating Reserves:** In response to Beacon Power's request for clarification that regulation can be provided as either regulation up or regulation down, we do not find additional clarifications are needed. The definition of regulating reserves as reserves capable of deployment in both the up and down direction provide adequate clarification.
10. **Section 39.2.5.b.xiv, Hourly Regulation Minimum Limit:** We will not require the Midwest ISO to clarify this provision, as recommended by Reliant & Dynegy. We consider it appropriate to state in the provision that the minimum limit should not be used to withhold a portion of capacity.
11. **Section 39.2.5.b.xxviii and 40.2.5.b.xxvii, Off-Line Supplemental Reserve Dispatch Status:** We find the Midwest ISO answer responsive to Xcel's concerns and therefore we will not require further clarification of these provisions.
12. **Section 40.2.2.h, Transmission Provider Obligations:** We consider Wisconsin Electric's recommendation that price information be posted as close to real-time as possible to be best discussed in stakeholder discussions and therefore we will not require tariff revisions.
13. **Section 40.2.10, State Estimator:** We find Ameren's recommendation for a substitute data source in the event the state estimator information is considered inaccurate to be beyond the scope of this proceeding.
14. **Section 40.2.17, Calculation of Real-Time Ex Post Locational Marginal Prices and Ex Post Market Clearing Prices:** We find that Xcel's request for a Midwest ISO explanation of the factors that contribute to differences between ex-ante and ex-post prices is best handled in a separate proceeding. We note that in the Southwest Power Pool, the Commission has addressed issues related to prices set in the market when operational constraints on the grid, such as transmission line limits or unit ramp capabilities, are violated in order to force a solution as identified by Xcel. We do not believe this

issue is related the implementation of the Midwest ISO's ASM. As such, we will require the Midwest ISO to submit a section 205 filing explaining the use of such penalty factors to relax constraints in the dispatch and explaining how prices will be set in such instances.

- 15. Section 40.3.3.a.x, Revenue Neutrality:** We consider Xcel's request for a more comprehensive description of all the components that make up the Revenue Neutrality Uplift charge to be best addressed in stakeholder discussions with the Midwest ISO.

IV. Conclusion

558. Our analysis of Midwest ISO's filing indicates that the proposed amendments, as modified herein, are reasonable and have not been shown to be unjust, unreasonable, unduly discriminatory or preferential, or otherwise unlawful. Accordingly, we will accept the proposed amendments, as modified, for filing, to become effective on June 1, 2008. Further, we direct the Midwest ISO to submit compliance filings, within 30 and 60 days of the date of this order, as discussed above.

The Commission orders:

(A) The Midwest ISO's proposed amendments are hereby conditionally accepted for filing, to become effective June 1, 2008, as discussed in the body of this order.

(B) The Midwest ISO is hereby directed to submit compliance filings, within 30 days and 60 days of the date of this order, as discussed in the body of this order and listed in Appendices B and C.

(C) The Midwest ISO is hereby directed to submit informational filings, within 60 and 180 days of the date of this order, as discussed in the body of this order and listed in Appendix C.

By the Commission. Commissioner Wellinghoff dissenting with a separate statement attached.

(S E A L)

Kimberly D. Bose,
Secretary.

I. Intervenors

A. Interventions with Protests or Comments

1. Acciona Wind Energy USA LLC (Acciona Wind)
2. Alcoa Inc. & Alcoa Power Generating Inc. (Alcoa)
3. Ameren Services Company (Ameren)
4. Beacon Power Corporation (Beacon Power)
5. Coalition of Midwest Transmission Customers (Midwest Transmission Customers)
6. Constellation Energy Commodities Group, Inc. and Constellation NewEnergy, Inc. (Constellation Companies)
7. Consumers Energy Company (Consumers Energy)
8. Dairyland Power Cooperative (Dairyland)
9. DC Energy Midwest, LLC (DC Energy)
10. Detroit Edison Company (Detroit Edison)
11. Duke Energy Corporation (Duke)
12. FirstEnergy Service Company (FirstEnergy)
13. Hoosier Energy Rural Electric Cooperative, Inc. & Southern Illinois Power Cooperative (Hoosier & Southern Illinois)
14. Indianapolis Power & Light Company (Indianapolis P&L)
15. Indiana Utility Regulatory Commission (Indiana Commission)
16. Integrys Energy Group, Inc. (Integrys)
17. International Transmission Company and Michigan Electric Transmission Company, LLC (ITC & METC)
18. Michigan Public Power Agency and Michigan South Central Power Agency (Michigan Power Agencies)

19. Midwest ISO Transmission Owners (Midwest ISO TOs)
20. Midwest Transmission Dependent Utilities (Midwest TDUs)
21. Northern Indiana Public Service Company (NIPSCO)
22. Organization of Midwest ISO States, Inc. (The OMS)
23. Otter Tail Power Company (Otter Tail)
24. Reliant Energy, Inc. & Dynegy Power Marketing, Inc. (Reliant & Dynegy)
25. Southwestern Electric Cooperative, Inc. (Southwestern)
26. Nucor Steel Marion, Inc. and SDI-Engineered Bar Products Division (Steel Producers)
27. Western Area Power Administration (WAPA)
28. Wisconsin Electric Power Company (Wisconsin Electric)
29. Xcel Energy Services, Inc. (Xcel)

B. Interventions Raising No Substantive Issues

1. Alliant Energy Corporate Services, Inc. (Alliant)
2. American Municipal Power-Ohio, Inc. (AMP-Ohio)
3. Dominion Retail, Inc. (Dominion)
4. Electric Power Supply Association (EPSA)
5. Exelon Corporation (Exelon)
6. Illinois Industrial Energy Consumers (Illinois Industrial Consumers)
7. Illinois Municipal Electric Agency (Illinois Municipal)
8. LS Power Associates, L.P. (LS Power)
9. Midwest Industrial Customers (Industrial Customers)
10. Nebraska Public Power District (Nebraska PPD)

11. Office of the Ohio Consumers' Counsel (Ohio Consumers' Counsel)
12. Prairie Power, Inc. (Prairie)
13. Public Utilities Commission of Ohio (Ohio Commission)
14. Strategic Energy, LLC (Strategic Energy)

II. Technical Conference Commenters

A. Parties Who Filed Comments on the Technical Conference

1. Ameren
2. Beacon Power
3. Consumers Energy
4. Detroit Edison
5. Dynegy
6. FirstEnergy
7. Indianapolis P&L
8. Integrys
9. Midwest ISO
10. Midwest TDUs
11. The OMS
12. Southwestern

B. Parties Who Filed Reply Comments on the Technical Conference

1. Beacon Power
2. Consumers Energy
3. Dynegy
4. Indianapolis P&L

5. Integrys
6. Midwest ISO & IMM
7. Midwest TDUs
8. The OMS
9. Southwestern

Minor Tariff Revisions to be Included in the 30-day Compliance Filing

We require the Midwest ISO to revise the following TEMT sections in a compliance filing to be submitted within 30 days of the date of this order:

1. Section 1.291f, Spinning Reserve Market Clearing Price definition in response to Midwest Transmission Customers
2. Section 1.295, Supplemental Qualified Resources definition revision in response to Ameren and Midwest Transmission Customers
3. Section 39.1.1 (sheet no. 472), Day-Ahead Energy and Operating Reserve Market Trading Deadline in response to Ameren
4. Section 39.2.10.a, Shortage Conditions in the Day-Ahead Energy and Operating Reserve Market revision in response to Ameren
5. Section 40.2.5.b.ix (sheet no. 555E-F), Hourly Ramp Rates revision in response to Wisconsin Electric
6. Section 40.2.5.d (sheet no. 555Z.01), Dispatch Bands revision in response to Ameren
7. Section 40.2.5.h (sheet no. 555Z.05), Weather Curves revision in response to Ameren
8. Section 40.2.5.j revision in response to Alcoa
9. Section 40.2.5.k and 40.2.6.d, Host Load Zone Dispatch Interval Demand Forecast revision in response to Xcel and Alcoa
10. Section 40.2.17.a, Determination of the Ex Post Locational Marginal Prices at Elemental Pricing Nodes revision in response to Duke
11. Section 40.3.4.a.ii, v, viii and xi, Excessive/Deficient Energy Threshold in response to Midwest Transmission Customers
12. Section 40.1.4.b, RAC Objective Function in response to Midwest Transmission Customers
13. Section 50.4, Independence of Market Monitoring per the comments of Midwest Transmission Customers

- 14.** Section 27 (sheet no. 1050Z.13) revision to rate formula in response to Ameren
- 15.** Schedules 3,5, and 6: revised definition of Midwest ISO Balancing Authority Load in response to Otter Tail

Compliance and Reporting Requirements**I. 30-Day Compliance Filing**

- A. Incremental increases in the mitigation thresholds; P 123.
- B. Method of determining reference levels; P 137.
 - 1. Revise the tariff to reflect that the IMM will only consider offers made under competitive conditions when determining a unit's reference level.
 - 2. Explain whether or not provisions such as section 64.1.4.c of the tariff, which provides that reference levels in the Midwest ISO's energy market may vary over the output range of a generator, recognize ambient temperature conditions, and consider seasonal factors, apply to the proposed ASM and, if so, include appropriate tariff revisions.
- C. Further clarify the auditing process in section 53.1A and make other revisions to that section as discussed above; P 151-54.
- D. State the additional imposition of mitigation to constrained reserve zones; P167.
 - 1. Clarify the relationship between mitigation within BCAs, NCAs, and reserve zones, including whether the three types of mitigation may overlap and apply to the same electrical area(s).
 - 2. Clarify whether reference levels need to be adjusted in the event that a generator located in a reserve zone moves to a different reserve zone in the following quarter and include any needed tariff revisions.
- E. Clarify the relationship between mitigation and demand response by stating that the IMM will: (1) monitor DRRs in a manner comparable to generation resources; (2) notify the Commission of any behavior by a demand response resource that the IMM has reason to believe has violated applicable market rules, according to section 53.3; (3) assess and report on uplift charges associated with the make-whole payments given to these demand resources; and (4) assess and report on the market effects of DRRs in the Midwest ISO's markets, including any market benefits and perceived market power risks, as part of its annual State of the Market Report; P 189.
- F. Revise tariff to extend any appropriate offer caps to DRR-I, in a manner comparable to other resources, in order to prevent them from exercising market power to extract excessive make-whole payments; P 190.

- G.** Further explain the linkage between scarcity pricing and emergency operations; P 218.
- H.** Clarify intent to restrict resources to providing no more than 20 percent of the system-wide requirement for contingency or regulating reserves and, if so, where in the tariff it specifies this requirement; P 242.
- I.** Clarify where the results of the reserve zone configuration study will be published in section 39.2.1A.c; P 243.
- J.** Clarify section 40.3.4.b.i by stating the units used in the charge (i.e., MW or MWh) and to which party those charges are directed and when those charges are applied; P 269.
- K.** Include an example formula calculation of how an Excessive/Deficient Energy Deployment Charge will be constructed; P 269.
- L.** Clarify intent with regard to dispatch band limits in two passages in Module C, Sheet 555Z, Section 40.2.5.d, line 12 and line 15; P 293.
- M.** Clarify sections 39.2.5.b.xxvi and xxvii to state that market participants can select a commitment status of 'not participating' in addition to the 'economic,' 'self-schedule' and 'not qualified' status designations; P 298.
- N.** Explain the need for limiting five-minute forecasts to one-twelfth of highest demand; P 333.
- O.** Resubmit tariff language implementing the approved settlement method in a single section of the tariff; P 341.
- P.** Reconcile the reduction of the RSG credit for revenues received for energy with the statement that a resource providing reserves is not providing energy; P 341.
- Q.** Include metering requirements for DRRs; P 345.
- R.** Detail any additional criteria for DRR eligibility in the tariff; P 348.
- S.** Specify a 0.1 MW and/or 0.1 MWh scheduling parameter in the tariff; P 355.
- T.** Specify provisions to measure the accuracy of dispatch interval demand forecasts for LSEs and DRRs and provisions to ensure the submission of accurate forecasts; P 362.

- U.** Clarify flow and schedule data for resources and manual dispatch signal instructions; P 382.
- V.** Address Otter Tail's concern regarding how Minnkota would be considered internal to the Midwest ISO, and clarify for WAPA the status of MDU as a Balancing Authority; P 383.
- W.** File a revised cost allocation that allocates the costs of reserves in the zone to load in the zone; P 412.
- X.** Submit cost allocations of a portion of the real-time ancillary services costs for carved-out GFAs that do not meet the reserve requirements in real-time; P 440.
- Y.** Include provisions to address issues related to non-compliance with NERC performance standards for Balancing Authorities; P 473.
- Z.** Add "Joint Registration Organizations" to the definition of Local Balancing Authorities; P 474.
- AA.** Submit one-minute interval demand data requirement for DRRs-I; P 493.
- BB.** Submit revised tariff language recognizing that certain deviations, such as positive resource deviations, do not contribute to the need to make emergency energy purchases, in accordance with cost-causation principles; P 498.
- CC.** Revise reference in the value in offer provision on sheet number 555Z.04 which refers to offer information in section 40.2.3.b that no longer has offer information; P 505.
- DD.** Remove physical capability information for offers from DRRs-I; P 507.
- EE.** Regarding the transition to the ASM, provide an update on the discussions among the parties to the existing CRSG; P 522.
- FF.** Revise definition of "Applicable Reliability Standards"; P 523.
- GG.** Replace term "any" with "all" in sections 1.291e and 1.295b; P 524.
- HH.** Clarify the monitoring and mitigation plan for the Real-Time Offer Revenue Sufficiency Guarantee Payment and Day-Ahead Margin Assurance Payment, including: (1) the types of behavior that the IMM will monitor for, including which markets are relevant to manipulation of these payments; (2) the types of impacts the IMM should monitor, including whether it will consider only the effects on the Day-Ahead Margin Assurance Payment and Real-Time Offer Revenue Sufficiency Guarantee Payment themselves, or additional effects on

market prices and/or RSG payments; (3) whether monitoring and any mitigation would occur only when there is a binding constraint; (4) whether mitigation would apply only within constrained areas, such as BCAs, NCAs, and/or constrained reserve zones; (5) the specific BCA and/or NCA thresholds that will apply, including any substitute or additional thresholds; (6) the circumstances when any substitute or additional thresholds would apply; and (7) whether the IMM may apply any mitigation or sanctions in response to gaming activities. We note that care must be taken with any mitigation to ensure that the behavior in question is objectively identifiable. P 544.

II. Identify and redact any provisions that are pending in other proceedings and file only those provisions accepted in this order and proposed revisions submitted in compliance with this order; P 547.

JJ. Miscellaneous tariff revisions.²¹⁴

II. 60-Day Compliance Filing

- A.** Submit a plan to implement automated mitigation; P 178.
- B.** Submit tariff revisions if adjustments are proposed to accommodate greater participation by DRRs and new technologies in the regulating reserve markets; P 365.

III. 60-Day Reporting

- A.** Report on Midwest ISO's efforts to accommodate greater participation by DRRs and new technologies in the regulating reserve markets; P 365.

IV. 180-Day Reporting

- A.** Report to the Commission on the merits of instituting a minimum reserve zone size; P 240.
- B.** Evaluation of the tolerance band, including the empirical data that shows how often units violate the tolerance band in three consecutive dispatch intervals so that those units are subject to the excessive and deficient energy charges; P 257.

²¹⁴ See *supra* section T.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Midwest Independent Transmission
System Operator, Inc.

Docket Nos. ER07-1372-000
ER07-1372-001

(Issued February 25, 2008)

WELLINGHOFF, Commissioner, dissenting:

Midwest ISO's initial Ancillary Services Market (ASM) proposal was rejected as deficient, in part because it lacked a market power study. The Commission provided guidance on how to perform the market power study.¹ As part of this filing, Midwest ISO submits a market power study performed by an Independent Market Monitor (IMM). Several commenters point out that the market power study shows that high market shares, high concentration, and pivotal suppliers are present in each of the seven sub-regional markets and for each ASM product. The Organization of Midwest ISO States (OMS) concludes that market power is larger in the ASM than in Midwest ISO's energy market. Further, several commenters assert that there were numerous flaws in the methodology used for the market power study. They suggest that a more accurate market power study would demonstrate that the potential for the exercise of market power is even greater. The IMM concurs that the ASM creates market power.²

Where there is market power, the Commission considers on a case-by-case basis market power mitigation measures for sales involving ancillary services.³ The Commission has recognized that mitigation measures need to become stronger when the likelihood for market power is greater, stating, "This is because when the exercise of market power is more probable, the costs of interfering with the market are more likely to be overshadowed by the benefits of preventing the exercise of market power."⁴

¹ *Midwest Indep. Transmission Sys. Operator, Inc.*, 119 FERC ¶ 61,311 at P 37 (2007).

² IMM Aff. at 3.

³ *Final Rule on Market-Based Rates For Wholesale Sales of Electric Energy, Capacity and Ancillary Services By Public Utilities* (Order No. 697), 119 FERC ¶ 61,295 at P 1069 (2007).

⁴ *Midwest Indep. Transmission Sys. Operator, Inc.*, 108 FERC ¶ 61,163 at P 258 (2004).

The Commission has also expressed the view on numerous occasions that a wholesale electric power market works best when demand can respond to the wholesale price.⁵ Enabling demand resources improves the economic operation of electric power markets by, among other things, disciplining the bidding behavior of generators who may be inclined to exercise market power, so that the market produces competitive prices. As the Commission observed:

As more demand response is available during peak periods, power suppliers need to account more for price responsiveness of load when they consider higher-price bids. The more demand response is able to reduce the peak price, the more downward pressure it places on generator bidding strategies by increasing the risk to a supplier that it will not be dispatched if it bids too high.⁶

Thus, demand response helps reduce prices in competitive wholesale markets in several ways, such as by reducing generator market power and flattening an area's load profile. As I have stated before, my view is that demand response can mitigate market power most efficiently. The development of demand response can also affect, and perhaps decrease, the need for tools that otherwise mitigate generator market power.

In this case, the higher likelihood of the exercise of market power in the ASM, coupled with approval of scarcity pricing, makes it particularly important for Midwest ISO to have a comprehensive approach in place at market start-up to respond to and, as necessary, mitigate inappropriate bidding behavior. Despite the importance of demand response to such a comprehensive approach, Midwest ISO's filing contains no factual record assessing whether demand response can effectively participate in its markets under its proposed rules. Without such a record indicating potential demand response to discipline bidding behavior, the reasonableness of Midwest ISO's overall proposal, and particularly its plans to implement scarcity pricing, is called into question.

⁵ *New England Power Pool and ISO New England, Inc.*, 101 FERC ¶ 61,344 at P 44-49 (2002), *order on reh'g*, 103 FERC ¶ 61,344 (2003), *order on reh'g*, 105 FERC ¶ 61,211 (2003); *PJM Interconnection, L.L.C.*, 95 FERC ¶ 61,306 (2001); *PJM Interconnection, L.L.C.*, 99 FERC ¶ 61,227 (2002); *Sw. Power Pool, Inc.*, 116 FERC ¶ 61,306 (2006).

⁶ *Advance Notice of Proposed Rulemaking on Wholesale Competition in Regions with Organized Electric Markets*, 119 FERC ¶ 61,306 at P 39 (2007).

Midwest ISO's mitigation plan features the conduct and impact approach already employed in its energy market. The Commission declines to adopt many of the market participants' recommended modifications, such as tightening the threshold levels for economic withholding; setting offers of dominant suppliers to \$0 per MWh; cost-based reference prices; or applying mitigation measures when constraints are not binding. The Commission does adopt OMS's recommendation to phase in the threshold levels for economic withholding over a 15-month transition period. These administrative mitigation measures might be sufficient if effective demand response was available. Unfortunately, as noted above, it is far from clear that this is the case. Therefore, I am dissenting from today's order.

Treatment of Demand Response in Midwest ISO's Proposal

In our September 26, 2006 order evaluating Midwest ISO's efforts to implement a long-term resource adequacy program, we directed Midwest ISO to work with its stakeholders on the participation of demand response in its energy market.⁷ The rules proposed in this filing affect demand response's ability to participate in the energy market and ASM. I agree with the assessment of the Midwest Transmission Customers that the treatment of demand response under the proposed rules is unreasonable. The rules contain a number of economic disincentives and other barriers for demand response to participate in Midwest ISO's markets. As discussed below, we need to tailor requirements to encourage and maximize participation by demand response, just as the majority today finds that we need to maximize participation by generation resources.

Appropriate Compensation for Demand Response

A threshold issue is the appropriate compensation for demand response. Midwest ISO proposes the gross load settlement method. The Midwest Transmission Customers assert that the gross load approach provides little to no incentive for demand response to be a market participant. The gross load approach requires the demand response provider to pay for the energy it did not consume. Therefore, the Midwest Transmission Customers suggest that the net load settlement method should be used instead.

The majority declines to adopt the net load approach, stating that the incentive characteristic of the net load approach cannot be the basis for modifying Midwest ISO's proposal. The majority also states that the incentive benefit comes at the cost of a higher cost allocation to load without demand response. I think that the issue has been muddled

⁷ *Midwest Indep. Transmission Sys. Operator, Inc.*, 116 FERC ¶ 61,292 at P 55 (2006).

by a debate over some numerical examples of the two compensation methods that reflect oversimplified assumptions. Actual experience may provide some guidance. PJM employs the net load approach to compensate demand response. PJM reported that the deployment of demand response at \$5 million in compensation, using the net load approach, produced \$650 million in savings to the market.⁸ Load without demand response shared in these savings. Furthermore, PJM, the California ISO, and ERCOT use the net load settlement method to compensate demand response in their dispatchable energy and contingency reserve markets, while ISO-New England, PJM, and the New York ISO use the net load method to settle their voluntary economic energy and emergency programs.⁹

During periods of rising offer prices, particularly given scarcity pricing, very small percentage changes in demand can produce much greater percentage decreases in locational marginal prices (LMPs) charged to all customers. The compensation method needs to adequately reflect the value demand response brings to the market to ensure that, when demand is needed most during periods of high prices, the rules have not erected an economic barrier to participation. I am concerned that the gross load approach approved in today's order does not achieve this goal.

The gross load approach not only requires the demand responder to pay in the day ahead market for energy and ancillary services that it will not consume, but also subjects the customer to charges for real-time deviations from this artificially high demand level. By contrast, under a modified net load approach, if the cleared demand reduction was reflected in the customer's cleared day ahead demand level, there would be no need to incur the cost of over-scheduling resources to meet the artificially higher demand. As a result, there would be no uplift to collect from customers. Therefore, I would have approved a modified version of the net load settlement method, as described above. I am also open to considering other methods of compensation that reflect the value that demand response brings to the market.

⁸ See PJM News Release, "Early Aug. Demand Response Produces \$650 Million Savings in PJM," Aug. 17, 2006, available at <http://www.pjm.com/contributions/news-releases/2006/2006.html> (last accessed Feb. 25, 2008).

⁹ See Midwest ISO Answer at 64. Midwest ISO also proposes to use the net load method for its emergency only program. The Commission has not yet acted on that proposal.

Other Barriers to Demand Response Participation

There are other proposed rules that also unnecessarily restrict or preclude the ability of demand response providers from participating in these markets.

The Midwest Transmission Customers and Alcoa state that Midwest ISO's proposed telemetering requirement will limit the practical ability of demand response to participate in the markets and preclude the participation of small manufacturing loads due to the expense. I agree that measurement and verification is critical. At the same time, I favor facilitating the development of DRRs, and I am concerned that the expense of the Midwest ISO's proposed metering and telemetering requirement may dissuade demand response providers, particularly small manufacturers, from participating.

Telemetering is not the only means that RTOs have used to measure and verify the performance of demand response providers. The form of measurement and verification should reflect the function of the service being provided, particularly because this requirement applies to both the energy and ancillary services markets. For example, regulating services may require real-time information on the status of the resource performing this function that requires telemetering. In contrast, other RTOs have found that such minute-to-minute real-time metered information and forecasts are not essential to the provision of other functions, such as energy. Those RTOs have successfully used baselines derived from historic metered information to measure demand response performance.

I would also point out that Midwest ISO's proposal already reflects some degree of flexibility with regard to telemetering. Section 40.3.3 provides for a lag in submittal of metered values by market participants, including at some time after settlement. This accommodation would seem to indicate that metered data need not be provided on a real-time basis. For these reasons, I would have directed Midwest ISO to provide a mechanism, including use of existing metering infrastructure, to allow small industrial manufacturers to participate, and to continue to work with other industrial customers and interested parties to develop more flexible metering requirements.

Another issue concerns Midwest ISO's proposal to require the demand response provider to submit five-minute demand forecasts as a baseline for measuring performance. For a generator, updating its operating status for five-minute intervals is discretionary. Moreover, the five-minute forecast is used to settle compensation for services provided by demand response, but does not appear to be a factor in determining compensation to a generator. Alcoa asserts that the five-minute forecast requirement is burdensome and unnecessary for reliability. Midwest ISO does not claim that these

forecasts are required for reliability. Instead, the rationale that Midwest ISO, and the Commission accepts, is that the forecasts increase the accuracy of performance monitoring. I agree that measurement and verification is essential to the successful integration of demand response into markets. While I do not think that comparable treatment requires identical treatment, any difference should reflect the particular characteristics of a resource or the functions that resource is performing. Therefore, I believe that Midwest ISO must do more to demonstrate why this restriction is appropriate for demand resources when it is not also applied to generators. I would direct Midwest ISO to assess, during the start-up and transition of the market, the operation of the DRR metering and dispatch interval forecasting in providing comparability of DRR to generating resources as intended. It is important to note in this respect that other RTOs have successfully used Commission-approved baselines based on historical performance.

In addition, the rules governing the submittal of a five-minute load forecast include the limitation that the forecast cannot exceed one-twelfth of the highest demand recorded in the load zone from the most recent commercial model update. Commenters suggest that the one-twelfth limitation is impossible as a practical matter because the most recent commercial model update may have been made during low load periods. Effectively, this restriction would foreclose any load growth that occurs within a demand response resource. Midwest ISO has failed to explain and support the need for the limitation. In fact, the one-twelfth limitation appears to defeat the purpose of an up-to-date forecast of operational status. I would reject the one-twelfth limitation.

A further barrier for demand response to overcome is Midwest ISO's proposal to require that regulating and operating reserves supply reserves for a minimum continuous duration of 60 minutes. The 60-minute sustainability requirement is proposed to accommodate design and operational restrictions that may prohibit generation resources from cycling the regulation control system statuses.¹⁰ From the record, it is not clear whether demand resources have similar design and operational restrictions. Alcoa asserts that this requirement prohibits batch load from participating. Likewise, Beacon Power claims that this requirement precludes participations by new technologies. If demand response providers do not have similar design and operational restrictions, the 60-minute sustainability requirement should not apply. I would reject the applicability of this requirement to demand response providers unless and until Midwest ISO can explain and support the need for such restriction.

Finally, as demand response providers gain experience with the operation of the energy and ancillary services markets, unanticipated and unintended barriers to their

¹⁰ Ron Jones Test. at 47.

participation in the markets may become apparent. Given the higher probability of the exercise of market power, particularly with allowing scarcity pricing, it is essential that we ensure that effective demand response exists to discipline generator bidding behavior. OMS's recommendation to ratchet-up the conduct thresholds over a transition period is a useful model. I would direct the Midwest ISO to evaluate, through stakeholder discussions, the need for adjustments to operating rules to remove barriers to greater participation of demand response. I would require Midwest ISO to submit progress reports every 90 days for the duration of the transition period to be filed concurrently with the IMM reports required in this proceeding. I would also require the IMM to include in its reports aggregated data regarding demand response participation including, but not limited to, MWs bid (volume and price); MWs accepted (volume and price); percentage of load reduced; number of customers participating; and an assessment of market effects of demand response resources. These data and analyses would provide useful information to determine whether adjustments are needed as the energy and ancillary services market develops.

For all of these reasons, I respectfully dissent from today's order.

Jon Wellinghoff
Commissioner