

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Norman C. Bay, Chairman;
Cheryl A. LaFleur, and Colette D. Honorable.

Midcontinent Independent System Operator Inc. Docket No. ER16-1790-000

ORDER DENYING REQUEST FOR WAIVER

(Issued September 27, 2016)

1. On May 26, 2016, Midcontinent Independent System Operator Inc. (MISO) submitted a request for a limited waiver of its Open Access Transmission, Energy and Operating Reserve Markets Tariff (Tariff), regarding the minimum ramp rate eligibility requirement for compensation of a resource under manual re-dispatch or emergency re-dispatch conditions.¹ Specifically, MISO requests waiver of section 33.8.2.a(1)(a).ii, Schedule 27, and Attachment AA of the Tariff,² as well as any other provisions regarding compensation for manual re-dispatch or emergency re-dispatch, to the extent those provisions may preclude, and/or may not otherwise authorize, full compensation and cost recovery for Entergy Arkansas, Inc.'s (Entergy Arkansas) compliance with MISO's manual re-dispatch and emergency directives. In this order, we deny MISO's waiver request.

I. Background

2. On December 22, 2006, the Commission conditionally accepted MISO's proposed price volatility make-whole payment program.³ MISO proposed the program to address inflexible quantity offers and low ramp rates in the real-time market associated with

¹ Transmittal Letter at 1.

² MISO, FERC Electric Tariff, Module B, § 33.8.2.a(1)(a).ii (36.0.0); MISO, FERC Electric Tariff, Schedule 27 (38.0.0); Attachment AA (32.0.0).

³ *Midwest Indep. Transmission Sys. Operator*, 117 FERC ¶ 61,325 (2006) (December 2006 Price Volatility Order), *order on compliance*, 119 FERC ¶ 61,160, *order on reh'g*, 119 FERC ¶ 61,176 (2007).

generators' attempts to avoid being cleared by the real-time dispatch system based on economic concerns. As a result of generators offering a relatively small spread, compared to the generators' operating capabilities, between their economic maximum and economic minimum and/or decreasing their ramp rates in the real-time market, MISO was left with fewer dispatch options to manage the reliability of the transmission system. This reduction in options also increased the probability of price volatility and raised the risk that MISO would be required to commit extra, more expensive units that may entail additional revenue sufficiency guarantee payments.⁴ The program was intended to remove generators' incentives to underbid ramp rates and to offer quantity inflexibly, both of which made generator offers less flexible. As part of the program, price volatility make-whole payments were to be paid to qualifying generators not recovering their Day-Ahead Margin⁵ or their incremental energy costs given the locational marginal pricing (LMP) that results in the market due to being economically or manually re-dispatched in real-time.⁶

3. Price volatility make-whole payments were designed to incent sufficient ramping and generator offer quantity flexibility by ensuring that the generator is as well off after responding to real-time dispatch instructions as if it had not been re-dispatched in real-time. For generation resources to qualify for price volatility make-whole payments, they were required to meet certain eligibility requirements for fixity, performance, offer continuity, and flexibility.⁷ The Commission agreed with MISO that "the eligibility

⁴ December 2006 Price Volatility Order, 117 FERC ¶ 61,325 at P 5.

⁵ Day-Ahead Margins are "[t]he difference between the Market Participant's accepted Day-Ahead Energy Offer and the Day-Ahead Ex-Post LMP for that interval." MISO, FERC Electric Tariff, Module A, § 1.D (38.0.0).

⁶ There are several reasons Day-Ahead Margin erosion may occur, including MISO's settlement of real-time five-minute dispatch intervals using hourly average prices. *See* December 2006 Price Volatility Order, 117 FERC ¶ 61,325 at nn.7, 8.

⁷ Flexibility criteria require the behavior that the price volatility make-whole payments were designed to incent by establishing minimum dispatch ranges and ramp rates for receipt of the price volatility make-whole payments. The fixity, performance, and offer continuity criteria were developed to prevent gaming. Fixity criteria require day-ahead offer data to remain unchanged when submitted as real-time offer data for each interval within a given hour; performance criteria require resources to comply with MISO dispatch instructions within a specified tolerance band; offer continuity criteria require a resource to meet all applicable offer fixity or performance criteria in all intervals of a given hour. December 2006 Price Volatility Order, 117 FERC ¶ 61,325 at PP 6–9.

criteria are required to address the potential [price volatility make-whole payment] gaming risks identified by [M]ISO to prevent such activity from occurring.”⁸

4. Due to software limitations, only price volatility make-whole payments associated with manual re-dispatch were implemented in February 2008. Later, when developing its Ancillary Services Market, MISO filed to implement the price volatility make-whole payment program for economic re-dispatch, including operating reserve revenues and costs in the price volatility make-whole payment programs for manual and economic re-dispatch, and split the payment into a Real-Time Offer Revenue Sufficiency Guarantee Payment⁹ and a Day-Ahead Margin Assurance Payment (DAMAP).¹⁰ DAMAP protects a generator’s Day-Ahead Margin when its Day-Ahead Margin would be eroded with the dispatch of energy or operating reserves below day-ahead schedules either economically or through manual re-dispatch. It compares the generator’s cost of buying out of its day-

⁸ December 2006 Price Volatility Order, 117 FERC ¶ 61,325 at P 39. In its filing proposing the price volatility make-whole payment program, MISO provided two examples of potential gaming strategies which were significantly more complex than a generator failing to offer sufficient ranges between its economic minimum and maximum and sufficient ramp rates. The first gaming strategy identified was a generator raising its output, in real-time, above the MISO instructed dispatch rate in a particular hour in order to incur incremental energy costs higher than the prevailing LMP, setting a contrived basis for extracting windfall price volatility make-whole payments for the subsequent hours as MISO gradually reduced the unit’s output based on its minimal ramp rate. The second strategy identified was a generator elevating its output level by increasing the economic minimum offer after the day-ahead market has cleared and thus keeping itself from being dispatched to the lower offered day-ahead output level and receiving additional price volatility make-whole payments. MISO’s September 29, 2006 filing in Docket No. ER06-1552-000, Tab D, Affidavit of Mr. Joe Gardner at P 14.

⁹ Real-Time Offer Revenue Sufficiency Guarantee Payments apply to the dispatch of energy above day-ahead schedules either economically or through manual re-dispatch when the resource meets specified eligibility criteria. These credits occur when the sum of the revenue from hourly real-time ex post LMPs and hourly real-time ex post Market Clearing Prices does not fully recover the incremental energy costs and operating reserve costs of such resources. *Midwest Indep. Transmission Sys. Operator, Inc.*, 122 FERC ¶ 61,172, at P 540 (2008). *See also* MISO, FERC Electric Tariff, Module C, § 40.3.5.1 (36.0.0); Module B, § 33.8.2 (36.0.0); Schedule 27 (38.0.0).

¹⁰ *Midwest Indep. Transmission Sys. Operator, Inc.*, 122 FERC ¶ 61,172 at PP 540, 543-544; *Midwest Indep. Transmission Sys. Operator, Inc.*, 125 FERC ¶ 61,318, at P 115 (2008).

ahead position at the real-time prices versus its day-ahead offer (representing its cost savings of not having to produce the energy).¹¹

5. The Tariff's specific flexibility eligibility requirements for manual re-dispatch DAMAP include (1) that a generation resource's offered ramp rate for its day-ahead committed hours and real-time must run committed hours must be greater than: (a) 0.5 MW per minute and (b) one-half of one percent of its hourly economic maximum dispatch level per minute; and (2) the up and down ramp capability dispatch status must be submitted as economic.¹² Failure to meet any of these requirements over four or more consecutive dispatch intervals results in a generation resource not receiving the manual re-dispatch price volatility make-whole payment (including any manual re-dispatch DAMAP) in the hour during which such failure occurs and in each subsequent hour of the manual re-dispatch period. In 2008, MISO proposed higher minimum offered ramp rate eligibility criteria for manual re-dispatch than the then-current price volatility make-whole payment offered ramp rate eligibility requirements for economic dispatch, to ensure that units eligible for compensation could be manually re-dispatched in sufficient quantities to meet expected system needs and in order to give generation resources the incentive to maintain greater ramp rates in the real-time market, thereby increasing their accessible dispatch range.¹³ In accepting that proposal, the Commission noted that the purpose of the manual re-dispatch price volatility make-whole payment is to incent generators to comply with manual re-dispatch instructions, to help ensure system reliability. The Commission observed that allowing parties to severely limit their ramp rates would undermine such reliability.¹⁴

II. MISO's Waiver Request

6. MISO's waiver request is the result of two Alternative Dispute Resolution proceedings at MISO initiated by Entergy Arkansas's request to seek compensation for the re-dispatch of its Arkansas Nuclear One, Units 1 (ANO-1) and 2 (ANO-2) (together, the Nuclear Units), located in Pope County, Arkansas. According to MISO, prior to the

¹¹ The calculation of DAMAP includes any offsetting real-time margins associated with real-time cleared Energy, Operating Reserve, Up Ramp Capability and/or Down Ramp Capability in excess of Day-Ahead Schedules for Operating Reserves. MISO, FERC Electric Tariff, Schedule 27 (38.0.0).

¹² See MISO, FERC Electric Tariff, Module B, § 33.8.2 (36.0.0).

¹³ *Midwest Indep. Transmission Sys. Operator, Inc.*, 122 FERC ¶ 61,198, at P 23 (2008) (March 2008 Price Volatility Order).

¹⁴ *Id.* P 25.

Alternative Dispute Resolution proceedings discussed below, MISO mostly denied market settlement disputes filed by Entergy Arkansas related to DAMAP compensation. It did so based on the Tariff's minimum ramp rate eligibility criteria for manual re-dispatch DAMAP and the absence of any Tariff provision for compensating units hampered by operating limitations when returning to normal output levels after MISO lifts manual re-dispatch directives.¹⁵ MISO states that on May 4, 2015, Entergy Arkansas, through an Alternative Dispute Resolution request, sought compensation in the form of DAMAP for the Nuclear Units, which MISO manually re-dispatched on December 9, 2014 (for reliability purposes) and December 21, 2014 (for a local transmission emergency). On November 16, 2015, Entergy Arkansas, through an additional Alternative Dispute Resolution request, sought compensation in the form of DAMAP for ANO-1, which MISO manually re-dispatched for reliability purposes on April 27 and 28, 2014 (due to storm damage on the transmission system). MISO states that it consolidated the consideration of the two Alternative Dispute Resolution proceedings due to the similarity of the relevant facts and issues.

7. MISO states that the Nuclear Units had very low offered ramp rates on the dates specified (0.1 MW per minute), reflecting their role as baseload nuclear units, and that the low offered ramp rates rendered them ineligible for DAMAP, but that they complied quickly with the manual re-dispatch instructions.¹⁶ MISO also states that, due to the Nuclear Units' operating characteristics, it took a significant amount of time for the units to return to their normal output levels after being re-dispatched down on December 9 and 21, 2014, and thus those units were unable to earn sufficient revenue during the hours in which they ramped up to compensate them for the output they otherwise would have produced had they not been dispatched down.¹⁷

8. MISO argues that the minimum ramp rate offer requirement for manual re-dispatch DAMAP payments should not apply to the Nuclear Units on the dates specified. MISO alleges that the requirement should only be applied to prevent gaming behavior that extracts windfall make-whole payments, not to preclude or reduce the recovery of legitimate production costs incurred when a unit complies with manual re-dispatch

¹⁵ Transmittal Letter at 4.

¹⁶ MISO states that Entergy Arkansas received some compensation for the December event under Attachment AA of the Tariff, "Compensation and Cost Recovery for Actions During Emergency Condition." *Id.* at 3.

¹⁷ According to MISO, it took ANO-1 nine hours on December 9, and three hours on December 21, and ANO-2 fourteen hours on December 9, and fifteen hours on December 21 to return to their normal output levels. *Id.*

directives. MISO references the unique operating characteristics and limitations of nuclear plants (such as the Nuclear Units), which it states do not vary their offers in a manner that could game the system and unduly extract make-whole payments. MISO also highlights that the Nuclear Units complied with the re-dispatch instructions at a rate significantly above 0.5 MW per minute when MISO issued manual re-dispatch directives, despite Entergy Arkansas having offered a lower ramp rate. MISO further states that, at the time of the incidents (April and December of 2014), Entergy Arkansas was not familiar with the Tariff's manual re-dispatch ramp rate offer eligibility requirement for DAMAP because the incidents occurred in the year after Entergy Arkansas's integration into MISO. MISO states that Entergy Arkansas has since updated the ramp rate value in its offers for the Nuclear Units to greater than 0.5 MW per minute, and thus now meets that ramping flexibility eligibility criterion for DAMAP.

9. Additionally, MISO states that the Commission cautioned that “parties should not be required to have ramp rates beyond those that are operationally feasible for their units.”¹⁸ MISO notes that on rehearing, the Commission declined one party's request that the Commission require MISO to amend its Tariff to include a provision authorizing MISO to waive the ramp rate eligibility requirements for manual re-dispatch on a case-by-case basis when a resource is needed to alleviate congestion, but its operational limits render it ineligible to be compensated for manual re-dispatch. MISO also notes one of the Commission's issues with such a request was that there were no identified criteria for such a waiver.¹⁹ MISO further states that the Commission deemed it prudent to start implementing the manual re-dispatch provisions “in a more conservative mode,” and monitor its results “before attempting to expand the program” or “loosening the eligibility criteria in the future.”²⁰

10. MISO also states that it believes that it is equitable to compensate Entergy Arkansas for the hours it took the Nuclear Units to resume their normal output levels during December 9 and 21, 2014, based on Entergy Arkansas's explanation that the Nuclear Units' operating characteristics limited the units' ability to ramp back up to normal operating levels after the manual re-dispatch period ended. In order to be compensated for such hours, MISO argues that, for DAMAP calculation purposes, the Nuclear Units could and should have been deemed continually subject to manual re-

¹⁸ *Id.* at 8 (citing March 2008 Price Volatility Order, 122 FERC ¶ 61,198 at P 25)

¹⁹ *Id.* (citing *Midwest Indep. Transmission Sys. Operator, Inc.*, 124 FERC ¶ 61,137, at P 8 (2008) (August 2008 Price Volatility Order on Rehearing)).

²⁰ *Id.* (citing August 2008 Price Volatility Order on Rehearing, 124 FERC ¶ 61,137 at P 9).

dispatch to increase output for the time needed for them to resume normal output levels after the lifting of the earlier manual re-dispatch directives to reduce output, which MISO alleges is consistent with the Commission's pronouncement that "it is important that generators not be penalized for complying with manual re[-]dispatch instructions," and that they "be held harmless" for their acts of compliance.²¹

11. MISO argues that the waivers requested in this filing meet all of the criteria for a Tariff waiver to be granted including: (1) the entity seeking the waiver acted in good faith; (2) the waiver is of a limited scope; (3) a concrete problem needs to be remedied; and (4) the waiver will not have undesirable consequences, such as harming third parties.²² MISO argues that it acted in good faith in evaluating the claims brought by Entergy Arkansas and in pursuing the resolution of those claims. MISO states that the requested waiver is limited in scope to the remedy for under- or non-compensation, and under- or non-recovery of costs, associated with Entergy Arkansas's compliance with MISO's manual re-dispatch and emergency directives on the dates identified. Further, MISO states that the inability to receive full compensation and recovery of costs is a concrete problem that the waiver will enable MISO to remedy. MISO argues that the waiver will not have undesirable consequences, as the relief involves making whole, and holding harmless, units that duly complied with manual re-dispatch and emergency directives. Any resulting additional DAMAP payment cost would be allocated to market participants, using the DAMAP settlement methodology, based on market participants' load ratio share during the dates and intervals for which Entergy Arkansas would be granted relief of the eligibility requirements for the Nuclear Units. MISO asserts that it is considering potential Tariff revisions "that would avoid unintended and inappropriate impediments to the full compensation and cost recovery of Resources that duly comply with MISO's [m]annual [r]e[-]dispatch and emergency directives."²³

12. MISO requests an effective date for the waivers of March 27, 2016 in order to provide compensation to Entergy Arkansas in the amount of \$1,555,359.67.

III. Notice and Responsive Pleadings

13. Notice of MISO's filing was published in the *Federal Register*, 81 Fed. Reg. 35,758 (2016), with interventions and protests due on or before June 16, 2016. Timely motions to intervene were filed by NRG Power Marketing LLC, GenOn Energy

²¹ *Id.* at 10 (citing December 2006 Price Volatility Order, 117 FERC ¶ 61,325 at P 53).

²² *Id.* at 5.

²³ *Id.* at 12.

Management, LLC, and Arkansas Electric Cooperative Corporation. Entergy Arkansas filed a timely motion to intervene and comments supporting MISO's waiver request. Entergy Arkansas states that acceptance of the waiver request will promote the goal of following MISO's dispatch orders and thereby assist in maintaining reliability. Entergy Arkansas argues that its low ramp rate did not preclude its units from following the MISO dispatch request, as nuclear units have restraints to increasing power that do not exist when decreasing power. Entergy Arkansas also notes that it has since updated the ramp rate values in its offers for the Nuclear Units to be greater than 0.5 MW per minute.

IV. Discussion

A. Procedural Matters

14. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2016), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

B. Commission Determination

15. We will deny MISO's waiver requests as they do not meet the criteria established by the Commission for a tariff waiver. The Commission has granted waiver of tariff provisions where: (1) the applicant acted in good faith; (2) the waiver is of limited scope; (3) the waiver addresses a concrete problem; and (4) the waiver does not have undesirable consequences, such as harming third parties.²⁴

16. With respect to MISO's request to waive the ramp rate offer eligibility criteria for manual re-dispatch DAMAP, we find that MISO has failed to satisfy the third and fourth criteria: that there is a concrete problem to be remedied, and that the requested waiver will not have undesirable consequences. MISO argues that a concrete problem exists due to the inability of Entergy Arkansas to receive full compensation and recovery of costs related to the re-dispatch of its Nuclear Units. We disagree. MISO's argument on compensation misconstrues the purpose of DAMAP; DAMAP is not a default payment mechanism for *responding* to dispatch instructions when called upon. Instead, it is an incentive mechanism to encourage units to *offer* more flexibly into the market so that dispatch decisions can be made efficiently during economic and emergency conditions. Therefore, when a unit does not offer flexibly, it has no claim to the flexible-offer based DAMAP compensation mechanism. Further, MISO does not support its claim that the Nuclear Units were not made whole for their as-offered production costs as

²⁴ See, e.g., *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,059, at P 14 (2016); *Calpine Energy Serv., Inc.*, 154 FERC ¶ 61,082, at P 12 (2016); *New York Power Auth.*, 152 FERC ¶ 61,058, at P 22 (2015).

a result of complying with MISO's manual re-dispatch instructions on the dates in question. MISO presents no evidence that the Nuclear Units were not able to recover their offers related to the output in megawatts that they were dispatched to in real-time during the dates in question. Moreover, if there was an issue related to as-offered production cost recovery, MISO does not explain why DAMAP is an appropriate mechanism for such offer cost recovery. DAMAP makes a generator whole relative to its Day-Ahead Margin, which is not directly related to the recovery of as-offered production costs.

17. We also disagree that a waiver here would not have undesirable consequences. The above 0.5 MW per minute ramp rate offer eligibility criterion for manual re-dispatch DAMAP was implemented primarily to incent flexible offers, not solely to protect against gaming, as MISO has argued in this proceeding. The record in the price volatility make-whole payment proceeding shows that DAMAP was designed to incent sufficient flexibility in the offers made by generators in MISO's market in order to provide MISO with more flexible dispatch options to manage the reliability of the transmission system, to decrease the probability of additional price volatility, and to reduce the chances of MISO having to commit extra, more expensive units that may entail additional revenue sufficiency guarantee payments.²⁵ Entergy Arkansas did not offer with the flexibility that MISO developed DAMAP to incent during the periods in question. While Entergy Arkansas responded to the manual re-dispatch instructions and moved outside its offer parameters when requested and thus provided value to the system as opposed to not moving, MISO was not able to consider that flexibility in its regular dispatch. Flexible offers are important to reducing costs during economic dispatch (making manual re-dispatch less necessary) because MISO is only able to dispatch the most efficient units to meet demand when it knows the actual parameters of the units on its system. To waive the ramp rate offer eligibility criterion here would allow behavior and corresponding compensation in contradiction of the flexible offer behavior the Tariff was written to encourage through the DAMAP incentive compensation scheme.

18. To the extent that MISO was implying that the Commission's statement "parties should not be required to have ramp rates beyond those that are operationally feasible for their units, as would be true for large coal units due to the requirement that a unit's real-time ramp rate be greater than one percent of its economic maximum," was intended to allow waiver of ramp rate eligibility criterion of above 0.5 MW per minute to provide for lower ramp rates, we disagree. The full quotation shows this to not be the case as the Commission was addressing a ramping requirement related to the economic maximum of the unit, and the Commission explicitly required the ramp rates which MISO asks to

²⁵ See December 2006 Price Volatility Order, 117 FERC ¶ 61,325 at PP 5 & 37; March 2008 Price Volatility Order, 122 FERC ¶ 61,198 at P 25.

waive in this case.²⁶ Furthermore, given that the Nuclear Units now offer at above a 0.5 MW per minute ramp rate, there does not appear to be an operational feasibility problem with the 0.5 MW per minute ramp rate offer requirement for these units. Also, the Commission clarified, when denying the request for MISO's Tariff to include a provision allowing MISO to waive the ramp rate eligibility criteria on a case-by-case basis, that the eligibility criteria provide generation resources with an incentive to increase the accessible dispatch range offered into the market. The Commission further stated that the reliability gains would be undermined if generation resources are permitted to severely limit their ramp rates, noting that the ramp rate eligibility criteria require generators to offer only a minimal amount of ramp capability in order to receive manual re-dispatch DAMAP.²⁷

19. We will also deny MISO's waiver request associated with MISO's proposal to compensate the Nuclear Units via DAMAP for the time needed for them to resume normal output levels after the lifting of the earlier manual re-dispatch directives to reduce output during the December 9 and 21, 2014 events for the reasons described above. MISO has not shown that the waiver will not have undesirable consequences or that a concrete problem exists associated with the Nuclear Units. As stated above, DAMAP is

²⁶ The Commission stated:

“[w]ith respect to the proposed ramp rate requirements, we conclude that it is appropriate for [M]ISO to require ramp rate flexibility in order for parties to qualify for the [manual re-dispatch make-whole payment]. The purpose of the [manual re-dispatch make-whole payment] is to give generators the incentive to comply with manual re[-]dispatch instructions, in order to help ensure system reliability. Allowing parties to severely limit their ramp rates would undermine such reliability gains. However, we also find that parties should not be required to have ramp rates beyond those that are operationally feasible for their units, as would be true for large coal units due to the requirement that a unit's real-time ramp rate be greater than one percent of its economic maximum. As such, we will require [M]ISO, in its compliance filing, to modify the ramp rate eligibility criteria to require greater than [0.5] MW per minute and greater than one half of one percent of the hourly economic maximum dispatch level of the generation resource, per minute.”

March 2008 Price Volatility Order, 122 FERC ¶ 61,198 at P 25.

²⁷ See August 2008 Price Volatility Order on Rehearing, 124 FERC ¶ 61,137 at P 7.

not a default payment mechanism for responding to dispatch instructions. Additionally, because the Nuclear Units did not provide the required flexibility in their offers, MISO's economic dispatch did not have access to the level of ramp rate flexibility that DAMAP was meant to reward resources for providing. To the extent that MISO believes that the units otherwise qualifying for DAMAP payments should be provided extra compensation for the time needed to ramp back up to their normal operating levels for other reasons, it can address this issue more generically in a Federal Power Act section 205 filing.²⁸

The Commission orders:

MISO's waiver request is hereby denied, as discussed in the body of this order.

By the Commission. Commissioner Clark is not participating.

(S E A L)

Kimberly D. Bose,
Secretary.

²⁸ 16 U.S.C. § 824d (2012).