145 FERC ¶ 61,278
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Acting Chairman;
Philip D. Moeller, John R. Norris,
and Tony Clark.

Midcontinent Independent System Operator, Inc.	Docket Nos. ER14-170-000 ER14-170-001

ORDER ACCEPTING TARIFF REVISIONS

(Issued December 26, 2013)

1. On October 23, 2013, as amended on October 30, 2013, pursuant to section 205 of the Federal Power Act (FPA),[1] Midcontinent Independent System Operator, Inc. (MISO) filed proposed revisions to its Open Access Transmission, Energy and Operating Reserve Markets Tariff (Tariff).[2] MISO proposes modifications to Attachment C (Methodology to Assess Available Transfer Capability) of its Tariff in order to make certain clarifications and revisions to its Available Flowgate Capability (AFC) calculations. In this order, the Commission accepts MISO's proposed Tariff revisions, effective December 22, 2013, as requested.

I. Background and Filing

2. Under Attachment C of MISO's Tariff, MISO must assess whether sufficient transfer capability would be available to accommodate service requested in any new Transmission Service Request (TSR).[3] TSRs are evaluated using a flow-based approach to determine the capability of the interconnected network to accommodate the TSR. As

[1] 16 U.S.C. § 824d (2012).

[2] MISO amended its filing on October 30, 2013 in order to include proposed Tariff changes that were addressed in the transmittal letter to the October 23 filing, but that were not properly reflected in the proposed Tariff language.

[3] MISO, FERC Electric Tariff, Attachment C, § 2 (4.0.0).

part of this process, TSRs are evaluated against a limited set of Flowgates[4] determined to be the most significantly impacted Flowgates ("most limiting Flowgates").[5] For a TSR to be granted on a transmission path, the incremental effect of the MW amount of the request must be smaller than the AFC on all of the most limiting Flowgates impacted by this path.[6] The AFC of a Flowgate refers to the measure of the flow capability remaining on a Flowgate for further commercial activity over and above already committed uses.[7]

3. MISO states that it has conducted a review of Attachment C and identified areas where clarification would facilitate transparency and better understanding of MISO's AFC calculation process.[8] MISO also states that it identified an improvement to its current process that would allow it to better incorporate transmission outages into its AFC calculation. Accordingly, MISO seeks to implement these identified modifications to Attachment C of its Tariff, as further described below. MISO notes that it reviewed these modifications with its stakeholders at the October 16, 2013 meeting of its AFC Working Group, and that the filing reflects input provided by the group members.[9] MISO requests an effective date of December 22, 2013 for the proposed Tariff changes.[10]

A. Inclusion of Transmission Outages in Power Flow Models

4. MISO states that Attachment C currently requires MISO to calculate AFC by constructing a power flow model for each of three time periods.[11] The first is an hourly

[4] Under MISO's Tariff, a Flowgate is defined as "[a] representative modeling of a facility or group of facilities that may act as a constraint to power transfer on the Bulk Electric System." MISO, FERC Electric Tariff, Module A, § 1.235 (0.0.0).

[5] MISO, FERC Electric Tariff, Attachment C, § 2 (4.0.0).

[6] *Id.*; *see also* Available Transfer Capability Implementation Document, TP-OP-005-r10 at 8 (effective Nov. 19, 2013), *available at:* http:// www.oasis.oati.com/MISO.

[7] *See* North American Electric Reliability Corporation (NERC) Glossary of Terms Used in Reliability Standards at 7.

[8] October 23 Filing, Transmittal at 1.

[9] *Id.* at 5.

[10] *Id.*

[11] *Id.* at 2.

model that represents peak conditions for the designated hour, the second is a daily model that represents peak conditions at 18:00 hours on the designated day, and the third is a monthly model that represents peak conditions at 18:00 hours on the third Wednesday of the designated month. MISO states that the drawback to the existing approach is that it requires MISO to devise a daily and monthly model based on conditions occurring at only one point in time, and does not account for transmission outages that might occur or be resolved over a time window. MISO contends that the use of a time window to measure transmission outages and restorations would result in a more accurate daily and monthly model, and therefore more accurate AFC calculations for those intervals. Furthermore, according to MISO, more accurate AFC calculations would allow MISO to optimize the operation of its transmission system, maximize transmission revenue, and facilitate the operation of competitive wholesale electricity markets.[12]

5. For these reasons, MISO proposes to revise section 2.1 of Attachment C to allow its model building process for daily and monthly models to account for transmission outages and restorations over certain time intervals.[13] Specifically, MISO proposes that: (1) for hourly models, MISO will use outages if they occur during the hour itself;[14] (2) for daily models, MISO will use outages if the duration of the outage is greater than 50 percent of the time period between 12:00 and 16:00 on that day; and (3) for monthly models, MISO will use outages if the duration of the outage is greater than 50 percent of the time period between 12:00 and 16:00 on the third Wednesday of the month.

B. Frequency of AFC Calculation

6. MISO states that it relies on its webTrans application to calculate and re-calculate AFC. MISO explains that its power flow model building process feeds into a separate process run by MISO's webTrans application, and that webTrans ultimately calculates the final AFC values for each AFC increment on a specified frequency, based on the formula described in Attachment C.[15] MISO states that, while other systems and processes depicted in Section 2 of Attachment C provide inputs to webTrans, webTrans is

[12] *Id.*

[13] *Id.*

[14] MISO only changes the location of Tariff language addressing the hourly model. That is, outages that occur during the hour itself will continue to be used in the hourly model.

[15] October 23 Filing, Transmittal at 3.

the software that produces the final AFC calculation. MISO explains that it calculates AFC for the Operating, Planning, and Study horizons at hourly, daily, and/or monthly increments.[16] Specifically, AFC is calculated hourly in the Operating horizon for hours zero through 48 and in the Planning horizon for hours 49 through 168. AFC is also calculated daily in the Planning horizon for days two through 33. AFC is calculated for months two through 36 in the Study horizon.[17] MISO states that it resynchronizes the power flow model at each of these increments, as well as each time a new TSR is accepted.[18]

7. In order to more accurately describe this process, MISO has proposed revisions to Section 2 of Attachment C to clarify: (1) the specific inputs that are entered into the webTrans system; (2) that webTrans is the software system that produces MISO's final AFC calculations; and (3) the frequency with which the webTrans software system produces that AFC calculation by interval.[19] Specifically, MISO proposes to revise Section 2 and 2.2 of Attachment C to clarify the distinction between synchronizations of the power flow models to webTrans and the AFC re-calculations that webTrans performs. MISO also proposes to revise Table 1 of Attachment C to better illustrate the time

[16] The Operating horizon spans two days. The Planning horizon spans from days two through 33. The Study horizon spans from months two through 36. The Planning horizon used for the AFC calculation in Attachment C is distinguishable from the more general transmission planning horizons defined in the NERC Glossary of Terms Used in Reliability Standards. NERC defines the Near-Term Transmission Planning Horizon as "[t]he transmission planning period that covers Year One through five." NERC Glossary of Terms Used in Reliability Standards at 46. NERC defines the Long-Term Transmission Planning Horizon as the "[t]ransmission planning period that covers years six through ten or beyond when required to accommodate any known longer lead time projects that may take longer than ten years to complete." NERC Glossary of Terms Used in Reliability Standards at 44.

[17] October 23 Filing, Transmittal at 3; Attachment C § 2 (6.0.0). MISO states that it attempts to resynchronize the model for days two through 33 every six hours and the model for the Study horizon each day.

[18] October 23 Filing, Transmittal at 3; Attachment C § 2 (6.0.0). MISO's proposed Attachment C states that, when an AFC resynchronization increment overlaps for the same time points, the more granular increment is used for AFC values and evaluation of TSRs. *Id*., Attachment C § 2 (6.0.0).

[19] *Id*., Transmittal at 3.

intervals over which AFC is calculated. MISO contends that these changes do not alter the substance of its AFC calculations, but merely serve to better describe the existing AFC calculation process.[20] As such, MISO argues that these changes are just and reasonable.

C. Use of Capacity Benefit Margin and Miscellaneous Revisions

8. MISO states that it calculates the Capacity Benefit Margin (CBM) in accordance with its Capacity Benefit Margin Implementation Document, as required by NERC Reliability Standards.[21] The CBM is the amount of firm transmission transfer capability preserved to enable access by load-serving entities to generation from interconnected systems.[22] Preservation of CBM for a load-serving entity allows that entity to reduce its installed generation capacity below that which may otherwise have been necessary without interconnections, so that the load-serving entity may meet its generation reliability requirements.[23] MISO states that after the CBM is calculated, it is incorporated into the AFC calculation by subtracting CBM from Total Flowgate Capability (TFC) on each Flowgate.[24] The transmission capacity set aside as CBM is therefore not available for sale to transmission customers and is used only when MISO is experiencing a significant capacity emergency.

9. MISO states that Section 4.4 of Attachment C currently describes that CBM will only be used during capacity emergencies.[25] In its October 23 filing, MISO seeks to revise Section 4.4 to make clear that CBM is subtracted from TFC on each Flowgate, and is not for sale to transmission customers. MISO states that these revisions are not substantive and are intended merely to clarify MISO's existing CBM procedures.

---

[20] *Id*.

[21] *Id*. at 4 (citing NERC Reliability Standard MOD-004-1, Requirement R1).

[22] *See* Capacity Benefit Margin Implementation Document, ED-SPP-30.044 § 5 (effective Mar. 31, 2013), *available at*: http:// www.oasis.oati.com/MISO.

[23] *Id*.

[24] October 23 Filing, Transmittal at 4. MISO uses transmission facility ratings provided by transmission owners along with the summer and winter peak ambient conditions to establish the TFC for each Flowgate. MISO, FERC Electric Tariff, Attachment C, § 2.1.1 (4.0.0).

[25] October 23 Filing, Transmittal at 4.

10. Finally, MISO proposes several other minor non-substantive revisions intended to further clarify MISO's Attachment C process, including, among others, changes or corrections to terminology that is used in Attachment C.[26]

II. Notice and Responsive Pleadings

11. Notice of the October 23, 2013 filing was published in the *Federal Register*, 78 Fed. Reg. 65,634 (2013), with interventions or protests due on or before November 14, 2013. Notice of the October 30, 2013 amendment filing was published in the *Federal Register*, 78 Fed. Reg. 67,138 (2013), with interventions or protests due on or before November 20, 2013. Timely motions to intervene were filed by Wisconsin Electric Power Company, Consumers Energy Company, a group of eight affiliated entities identified as the "NRG Companies," Exelon Corporation, and the MISO Transmission Owners.[27] Entergy Services, Inc. and the Entergy Operating Companies[28] (the Entergy

[26] *Id*. at 4-5.

[27] The MISO Transmission Owners for purposes of this proceeding consist of: Ameren Services Company, as agent for Union Electric Company d/b/a Ameren Missouri, Ameren Illinois Company d/b/a Ameren Illinois and Ameren Transmission Company of Illinois; American Transmission Company LLC; Big Rivers Electric Corporation; Central Minnesota Municipal Power Agency; City Water, Light & Power (Springfield, IL); Dairyland Power Cooperative; Duke Energy Corporation for Duke Energy Indiana, Inc.; Entergy Arkansas, Inc.; Entergy Louisiana, LLC; Entergy Gulf States Louisiana, L.L.C.; Entergy Mississippi, Inc.; Entergy New Orleans, Inc.; Entergy Texas, Inc.; Great River Energy; Hoosier Energy Rural Electric Cooperative, Inc.; Indiana Municipal Power Agency; Indianapolis Power & Light Company; International Transmission Company d/b/a ITC Transmission; ITC Midwest LLC; Michigan Electric Transmission Company, LLC; MidAmerican Energy Company; Minnesota Power (and its subsidiary Superior Water, L&P); Missouri River Energy Services; Montana-Dakota Utilities Co.; Northern Indiana Public Service Company; Northern States Power Company, a Minnesota corporation, and Northern States Power Company, a Wisconsin corporation, subsidiaries of Xcel Energy Inc.; Northwestern Wisconsin Electric Company; Otter Tail Power Company; Prairie Power Inc.; Southern Illinois Power Cooperative; Southern Indiana Gas & Electric Company (d/b/a Vectren Energy Delivery of Indiana); Southern Minnesota Municipal Power Agency; Wabash Valley Power Association, Inc.; and Wolverine Power Supply Cooperative, Inc.

[28] Entergy Arkansas, Inc., Entergy Gulf States Louisiana, L.L.C., Entergy Louisiana, LLC, Entergy Mississippi, Inc., Entergy New Orleans, Inc., and Entergy Texas, Inc., are collectively referred to as the Entergy Operating Companies.

Companies) submitted a motion to intervene out-of-time and comments on November 21, 2013. MISO filed an answer to the comments on December 6, 2013.

A. Entergy Companies Comments

12. The Entergy Companies state that MISO's proposed Tariff revisions, which merely change the point in time at which outage data will be included in the AFC models, would not result in improvements to model accuracy.[29] Moreover, the Entergy Companies assert that the proposed revisions have unintended consequences and the harm outweighs any benefit of improved accuracy. Specifically, the Entergy Companies state that MISO's proposal unnecessarily restricts transmission owners' flexibility in planning outages intended to improve or maintain system reliability or provide confirmed transmission service. The Entergy Companies argue that, in order for planned outages to be reflected in the AFC calculation, they would have to be rescheduled. The Entergy Companies also contend that, "unless an outage is reflected in the AFC process such that it would not allow short term sales on paths where capacity is unavailable due to the outage, the Reliability Coordinator may not approve the outage due to short term sales of transmission service," and therefore that decisions on outages will be made based on short-term service sales rather than reliability.[30]

13. The Entergy Companies state that, instead of its current AFC proposal, MISO could develop criteria which would allow transmission owners to schedule outages anytime during a study month and continue to honor the sale of available capacity while taking into account reductions resulting from outages schedules by transmission owners based on reliability planning criteria.[31] The Entergy Companies state that they currently use software that provides this flexibility and that would permit MISO to incorporate scheduled transmission outages into the AFC calculations. The Entergy Companies argue that MISO should explain why its proposed Tariff changes are just and reasonable in light of this available software.

14. The Entergy Companies propose alternative methods for reflecting outages in AFC models. Specifically, they suggest that MISO should use available software to include outages where the facility is of Class 1 or 2 and the outage duration is greater

[29] Entergy Companies Comments at 2-3.

[30] *Id*. at 3.

[31] *Id*.

than four concurrent days.[32] The Entergy Companies acknowledge that the methodology for reflecting outages in the FTR auction (as opposed to the AFC system) is an issue of more significance given MISO's market structure. However, the Entergy Companies are concerned that, because the Entergy Region is located between the Southwest Power Pool market and the Tennessee Valley Authority and Southern Companies classical AFC systems, point-to-point transactions will be of great importance even after the Entergy Region is integrated into MISO's markets. Consequently, the Entergy Companies state that using a reasonable and appropriate methodology for reflecting outages in AFC models is an important issue for market participants in the Entergy Region.

B. MISO's Answer

15. In response to the Entergy Companies' objections, MISO states that its proposal is an incremental improvement to its existing methodology that merely expands the scope of previously submitted and/or approved outages to be included in AFC calculations.[33] MISO states that the revisions to Attachment C will better reflect the expected transmission topology for an operating day rather than limiting the outages to be included in AFC calculations to those that are in place as of a specific point in time.[34] MISO states that many outages may span a significant part of an operating day, but, because they are placed back into service prior to the specific time point currently utilized, would not be reflected in MISO's current AFC models. MISO argues that its proposal to incorporate outages into its AFC models based on their occurrence during identified "windows" will increase the number of outages incorporated into MISO's AFC calculations, thereby producing a more representative sample of the population being estimated and providing a more accurate picture of conditions on the MISO transmission system over both the long- and short-term AFC calculation periods.[35]

16. In response to the Entergy Companies' argument that, when the proposed time windows are compared with the alternative time windows sought by Entergy, approvals for planned outages will be reduced by short-term sales, MISO states that the Entergy Companies ignore the fact that MISO's approval of transmission outages is performed pursuant to the requirements of the Tariff and its applicable Business Practices Manual

[32] *Id*. at 4.

[33] MISO Answer at 4.

[34] *Id*. at 2.

[35] *Id*. at 3.

(BPM) on outages. Specifically, MISO points out that under section 5 of BPM-008-r7, the criterion for approving outages is the reliability of the MISO transmission system.[36] MISO explains that it evaluates outage requests through power flow, contingency analysis, and stability analysis to determine violation of pre-and post-contingent thermal limits; violation of pre-and post-contingent voltage limits; and violation of pre-determined stability limits.[37] MISO argues that nothing about its proposed change to Attachment C would have any impact on any of MISO's outage evaluation and approval practices.[38]

17. MISO acknowledges the Entergy Companies' concerns regarding continued improvement of the methodology and criteria by which it incorporates outages into its AFC models. MISO commits to work with its stakeholders through the stakeholder process to examine additional enhancements.[39]

18. In response to the Entergy Companies' suggestion for MISO to use available software for AFC calculations, MISO states that such potential software changes and the related impacts are enhancements that should be raised and reviewed through the MISO stakeholder process, especially considering that the Commission is not required to consider suggestions of alternatives to find that MISO's proposed revisions are just and reasonable.[40] MISO notes that the proposed modifications to Attachment C were fully vetted through the MISO stakeholder process and all stakeholder comments received were incorporated into MISO's filing. Moreover, MISO states that it did not receive any comments on the Attachment C proposal from the representative for Entergy Services, Inc. during the stakeholder process.[41]

---

[36] *Id*. at 4.

[37] Pursuant to BPM-008-r7, if the outage analysis indicates that reliability can be maintained or that next-contingency system conditions would be acceptable, MISO approves the outage request and notifies the requestor. If the outage analysis indicates unacceptable system conditions, MISO works with the requestor to develop remedial steps to be taken prior to or during the proposed outage. MISO explains that only if no remedial steps are possible would MISO investigate alternate outage start and end times as submitted by the equipment owner or deny an outage request.

[38] MISO Answer at 5.

[39] *Id.* at 6.

[40] *Id.*

[41] *Id.* at 7.

III. Discussion

A. Procedural Matters

19. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2013), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

20. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2013), the Commission will grant the Entergy Companies' late-filed motion to intervene and comments given the Entergy Companies' interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

21. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2013), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We will accept the answer filed by MISO because it has provided information that assisted us in our decision-making process.

B. Commission Determination

22. We will accept MISO's proposed changes to Attachment C of its Tariff. We find that the non-substantive changes are just and reasonable because they increase transparency by clarifying MISO's current AFC calculation practices. We also find that MISO's proposal to construct power flow models using expanded time windows to account for transmission outages is just and reasonable because it will improve the accuracy of the AFC modeling process. This Tariff revision will allow MISO to account for transmission outages that may occur or be resolved within the allotted time window, instead of only accounting for outages that are occurring when MISO calculates its AFC at a single point in time. We find that this approach will produce a more representative sample of outages and provide a more accurate picture of system conditions during AFC calculation periods.

23. We find that the Entergy Companies have not provided enough information to support their claim that any benefit derived from improved model accuracy is outweighed by harm to transmission owners. The Entergy Companies have not shown how MISO's proposal to account for transmission outages over a time window, as opposed to during a single point in time, will impede the transmission owner's ability to schedule planned outages. Furthermore, the Entergy Companies have not shown how MISO's proposal would cause outage decisions to be made based on the selling of short-term service. MISO's power flow models would calculate AFC on a forward-looking basis for each hour, day, and/or month during the specified time period, in advance of decisions on short-term transmission sales. We accept MISO's explanation that the proposed Tariff change is an incremental improvement to its existing method for considering outages in

its AFC calculation, and that the proposal has no effect on the outage evaluation and approval process that is performed in accordance with the Tariff and MISO's BPM.

24. Having found MISO's proposal to be just and reasonable, we need not address the merits of the alternative proposal suggested by the Entergy Companies.[42] However, we encourage MISO to work with the Entergy Companies and other stakeholders to continue developing its AFC calculation process, in accordance with MISO's commitment in its answer.

The Commission orders:

MISO's proposed Tariff revisions are hereby accepted to become effective December 22, 2013, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

[42] *See Oxy USA, Inc. v. FERC*, 64 F.3d 679, 692 (D.C. Cir. 1995) (finding that, under the FPA, as long as the Commission finds a methodology to be just and reasonable, that methodology "need not be the only reasonable methodology, or even the most accurate"). *See also Cal. Indep. Sys. Operator Corp.*, 128 FERC ¶ 61,282, at P 31 (2009) (finding that, because the Commission found the ISO's proposal to be just and reasonable, it need not assess the justness and reasonableness of an alternative proposal); *Louisville Gas & Electric Co.*, 114 FERC ¶ 61,282, at P 29 (2006) (finding that "the just and reasonable standard under the FPA is not so rigid as to limit rates to a 'best rate' or 'most efficient rate' standard. Rather, a range of alternative approaches often may be just and reasonable"); *Entergy Servs., Inc.*, 116 FERC ¶ 61,275, at P 32 (2006) (finding that "[a] proposal does not need to be perfect, or the most desirable way of doing things, it need only be just and reasonable").