180 FERC ¶ 61,141
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Midcontinent Independent System Operator, Inc. Docket Nos. ER22-495-000
ER22-495-001

ORDER ACCEPTING PROPOSED TARIFF REVISIONS SUBJECT TO CONDITION

(Issued August 31, 2022)

1. On November 30, 2021, as amended on April 8, 2022,[1] pursuant to section 205 of the Federal Power Act (FPA),[2] Midcontinent Independent System Operator, Inc. (MISO) submitted proposed revisions to MISO's Open Access Transmission, Energy and Operating Reserve Markets Tariff (Tariff) to establish a seasonal resource adequacy construct. As discussed below, we accept MISO's proposed Tariff revisions, effective September 1, 2022, subject to condition.

I. Background

2. MISO's currently effective resource adequacy construct, primarily located in Module E-1 of its Tariff, requires that MISO establish annually a system-wide Planning Reserve Margin, which the Tariff defines as the percentage of Planning Resources[3] above the system's forecasted Coincident Peak Demand required to meet the Loss of Load Expectation (LOLE).[4] The Tariff requires that the Planning Reserve Margin be based on

[1] MISO's April 8, 2022 amendment was a response to a Commission staff deficiency letter.

[2] 16 U.S.C. § 824d.

[3] A Planning Resource is a Capacity Resource, Energy Efficiency Resource, or Load Modifying Resource that can be used to satisfy resource adequacy requirements. MISO, FERC Electric Tariff, Module A, § 1.P (65.0.0).

[4] MISO, FERC Electric Tariff, Module A, § 1.P (65.0.0). MISO's Planning Year begins on June 1 and ends on May 31 of the following year. *Id.*

an LOLE study, which assumes an LOLE of one day in 10 years (0.1 day per year).[5] MISO then calculates the Planning Reserve Margin Requirement (Reserve Requirement) for each Load Serving Entity (LSE) based on the LSE's Coincident Peak Demand and MISO's system-wide Planning Reserve Margin.[6]

3. LSEs must demonstrate that they satisfy their respective Reserve Requirements for each Planning Year. An LSE can satisfy its Reserve Requirement in any of the following four ways: (1) purchase Zonal Resource Credits (ZRC) through the Planning Reserve Auction (Auction) process; (2) submit a Fixed Resource Adequacy Plan (FRAP) to demonstrate that it has designated ZRCs to meet all or a portion of its Reserve Requirement; (3) self-schedule ZRCs and bid them into the Auction at a price of zero; and/or (4) pay the Capacity Deficiency Charge.[7]

4. MISO conducts the Auction annually in the first 10 business days of April and posts the results approximately six weeks prior to the Planning Year, which begins on June 1 and ends on May 31 of the following year.[8] The Auction uses a fixed reliability target, represented by a vertical demand curve, to indicate the total amount of ZRCs each Local Resource Zone (Zone) needs to satisfy the Reserve Requirements for each LSE located in that Zone. The Auction selects the least-cost set of Planning Resources needed to meet each Zone's total required Reserve Requirement, while respecting local and sub-regional constraints, and establishes the Auction Clearing Price for each Zone for the upcoming Planning Year.[9]

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[5] *Id.*, Module E-1, § 68A.2.1 (32.0.0). The LOLE study also assumes that there are no internal transmission limitations within MISO. *Id.*

[6] MISO, FERC Electric Tariff, Module E-1, § 68A.7 (32.0.0). If a state regulatory authority establishes an alternate Planning Reserve Margin, MISO will use the alternate Planning Reserve Margin for the geographic area under that state's jurisdiction. *Id*.

[7] *Id.* § 69A (35.0.0). The Capacity Deficiency Charge is equal to the Cost of New Entry (CONE) in the Zone where the LSE is deficient ZRCs, multiplied by 2.478, for each ZRC. *Id.*, Module E-1, § 69A.10 (31.0.0).

[8] *Id*., Module A, § 1.P (65.0.0); Module E-1, § 69A.7 (35.0.0).

[9] *Id*., Module E-1, § 69A.7.1 (46.0.0).

5. Planning Resources are eligible to convert Unforced Capacity (UCAP)[10] to ZRCs, which indicate the units of capacity (in MW) a given market participant can offer into the Auction, sell bilaterally, or submit through a FRAP.[11] MISO currently determines the UCAP value of Planning Resources based on resource type. For example, MISO will determine the UCAP for a Generation Resource based on an evaluation of the type and volume of interconnection service, Generator Verification Test Capacity (GVTC)[12] value, and forced outage rating of such Generation Resource.[13] MISO determines the UCAP for a Dispatchable Intermittent Resource or Intermittent Generation based on historical performance, availability, and type and volume of interconnection service, in accordance with MISO's Business Practices Manual (BPM) for Resource Adequacy.[14]

II. Filing

6. MISO states that generation resource retirements, increased reliance on intermittent resources, significant weather events with correlated generator outages, and declining excess reserve margins will profoundly impact future grid reliability, and that all industry participants have a shared responsibility to plan for these impacts and implement new policies and practices to ensure the continued reliability of the grid. MISO states that, as part of this responsibility, MISO must make substantive changes to its resource adequacy construct to address these emerging issues.[15]

7. MISO states that its current resource adequacy construct, which focuses on the procurement of capacity for an entire 12-month Planning Year to meet demand during one peak day of the Summer Season, was not designed to address the trends currently facing the MISO Region.[16] MISO explains that reliability risks associated with resource

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[10] UCAP is the amount of Capacity in megawatt (MW) assigned to a Planning Resource after accounting for its forced outage rate or historical availability. *Id.*, Module A, § 1.U (36.0.0).

[11] *Id*. § 1.Z (38.0.0).

[12] GVTC is the maximum output, in MW, that a Generation Resource, External Resource, or Behind-the-Meter-Generation (BTMG) can sustain over the specified period of time. *Id.* § 1.G (41.0.0).

[13] *Id*., Module E-1, § 69A.4.1 (36.0.0).

[14] *Id.*

[15] Transmittal at 2-3.

[16] *Id*. at 3. The months included in the Summer Season are June, July, and August.

adequacy have shifted from "Summer only" to a year-round concern, noting that, since 2016, MISO has declared 40 Maximum Generation Emergencies[17] (MaxGen Events), with more than 60% occurring outside of the Summer months. MISO states that the significant increase in MaxGen Events is being driven by the confluence of: the retirement of traditional, baseload generation resources; planned and forced generator outages in non-Summer months; an increased reliance on intermittent generation such as wind and solar; and extreme weather events resulting in numerous forced generator outages, including multiple polar vortex and Arctic storms.[18]

8. MISO argues that the causes of the increase in MaxGen Events cannot be addressed through "one-off, quick fixes" but rather require a robust solution that creates incentives for Capacity Resources[19] to be available when and where they are needed, as the existence of Capacity Resources is meaningless if those resources do not provide energy or reserves when needed.[20] MISO contends that a well-designed market construct includes both the planning horizon, which entails the identification and incorporation of risks across the planning year in developing resource adequacy requirements, and the operating horizon, which ensures that those resources have the incentive to provide energy and reserves when and where needed. MISO states that aligning the planning horizon with the operating horizon is a central goal of the proposed reforms in the instant filing.[21]

9. MISO states that its resource adequacy reform proposals focus on two related proposals: (1) the establishment of a seasonal resource adequacy construct coupled with availability-based accreditation for certain Planning Resources, and (2) a Minimum Capacity Obligation (MCO) that promotes securing capacity well in advance of the

[17] MISO, FERC Electric Tariff, Module A § 1.M (71.0.0).

[18] Transmittal at 3-4.

[19] Capacity Resources are the Generation Resources, Demand Response Resource-Type I, Demand Response Resource-Type II, Dispatchable Intermittent Resources, External Resources, Intermittent Generation, Stored Energy Resources – Type II, or Electric Storage Resources that are available to meet Demand. MISO, FERC Electric Tariff, Module A § 1.C (67.0.0).

[20] Transmittal at 4.

[21] *Id.*

Auction.[22] MISO states that the instant filing presents MISO's seasonal and accreditation proposal.

10. MISO states that it expects the shift to a seasonal construct will further mitigate resource adequacy risks throughout the year, not just in the peak Summer Season, by establishing more granular, seasonal resource adequacy requirements to help ensure sufficient Planning Resources are committed and obligated to be available when needed. MISO expects this transition to: (1) identify reliability needs unique to each Season; (2) align Planning Resource availability with seasonal needs; and (3) facilitate and better account for seasonal outages or partial year operations.[23]

11. MISO states that its accreditation reforms seek to ensure that resources are available when needed the most by aligning resource accreditation with availability during the highest risk period in each Season. MISO proposes a new Seasonal Accredited Capacity (SAC) methodology to determine the capacity accreditation of certain classes of resources. MISO states that it also proposes a tiered weighting structure, with a transition period, to determine individual resource accreditation by Season based on each resource's Real-Time offered availability, accounting for coordinated planned outages. MISO explains that expected outcomes of MISO's accreditation reforms are to: (1) increase confidence in the capacity MISO can count upon when needed by shrinking the gap between cleared capacity within the Auction and realized capacity during tight system conditions; (2) provide improved signals for availability and coordination; and (3) improve resource outage coordination processes. MISO states that measuring and accrediting Planning Resources based on their availability and performance during Resource Adequacy Hours (RA Hours) will better align expectations during times of highest need. MISO argues that the current practice of relying on installed capacity, adjusted for forced outages and reflecting average availability throughout the Planning Year, no longer provides an accurate expectation of availability, as proven by recent emergency events, especially those driven by extreme weather.[24]

12. To address these trends, MISO proposes to: (1) replace its single annual resource adequacy requirement with four seasonal resource adequacy requirements; (2) implement seasonal, availability-based accreditation called SAC for thermal resources and modify

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[22] *Id.* Concurrently with this filing, MISO submitted, in Docket No. ER22-496-000, a proposal to establish an MCO on LSEs. Concurrently with this order, the Commission rejects MISO's MCO Filing. *Midcontinent Indep. Sys. Operator, Inc.,* 180 FERC ¶ 61,142 (2022).

[23] Transmittal at 4-5.

[24] *Id.* at 5.

non-thermal resource accreditation to align with MISO's proposed seasonal resource adequacy construct; and (3) modify MISO's outage procedures and establish new requirements for resources to replace capacity during outages under certain conditions. MISO requests an effective date of September 1, 2022 for its proposed Tariff revisions.[25]

III. Notice of Filing and Responsive Pleadings

13. Notice of the filing was published in the *Federal Register*, 86 Fed. Reg. 69,024 (Dec. 6, 2021), with interventions and protests due on or before December 21, 2021. On December 3, 2021, Entergy Services, LLC (Entergy), acting on behalf of the Entergy Operating Companies[26] and the Supporting Parties,[27] filed a motion for an extension of the comment date, from December 21, 2021, to January 14, 2022. On December 9, 2021, the Commission granted Entergy's motion for an extension of the comment date to January 14, 2022.

14. Notices of intervention were filed by: the Mississippi Public Service Commission and Mississippi Public Utilities Staff (Mississippi Commission); the Missouri Public Service Commission; the Illinois Commerce Commission (Illinois Commission); the Michigan Public Service Commission (Michigan Commission); the City Council of the City of New Orleans; the Public Service Commission of Wisconsin; the Organization of MISO States (OMS); the Arkansas Public Service Commission; the Louisiana Public Service Commission (Louisiana Commission); the Public Utility Commission of Texas;

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[25] *Id.* at 52.

[26] The Entergy Operating Companies are: Entergy Arkansas, LLC; Entergy Louisiana, LLC; Entergy Mississippi, LLC (Entergy Mississippi); Entergy New Orleans, LLC; and Entergy Texas, Inc.

[27] The Supporting Parties are: Alliant Energy Corporate Services, Inc.; Ameren Services Company (Ameren), as agent for Union Electric Company, Ameren Illinois Company (Ameren Illinois) and Ameren Transmission Company of Illinois (Ameren Transmission); American Municipal Power, Inc. (AMP); Cleco Power LLC (Cleco Power); Consumers Energy Company (Consumers Energy); Dairyland Power Cooperative; DTE Electric Company (DTE Electric); Duke Energy Business Services, LLC for Duke Energy Indiana, LLC; EDF Renewables; Hoosier Energy Rural Electric Cooperative, Inc. (Hoosier); Illinois Municipal Electric Agency (IMEA); Indiana Municipal Power Agency; Indianapolis Power & Light Company (IPL); Madison Gas & Electric Company; Midland Cogeneration Venture; Minnesota Power; Northern Indiana Public Service Company; Otter Tail Power Company; Prairie Power Inc.; Rockland Capital; Southern Illinois Power Cooperative; Vistra; Wabash Valley Power Alliance; and WEC Energy Group.

the Indiana Utility Regulatory Commission (Indiana Commission); and the Kentucky Public Service Commission.

15. Timely motions to intervene were filed by: Cooperative Energy; NRG Power Marketing LLC; AMP; Energy Michigan, Inc. (Energy Michigan); Alliant Energy Corporate Services (Alliant); Wabash Valley Power Association, Inc.; Indiana Municipal Power Agency; Hoosier; Exelon Generation Company, LLC (Exelon); Solar Energy Industries Association (SEIA); American Clean Power Association (ACP) and Clean Grid Alliance (CGA); Fresh Energy; the Sustainable FERC Project and Natural Resources Defense Council (Sustainable FERC Project and NRDC); Duke Energy Corporation (Duke Energy); IPL; Calpine Corporation; Ameren; NextEra Energy Resources, LLC; Entergy; MidAmerican Energy Company (MidAmerican); Great River Energy; IMEA; Xcel Energy Services Inc.; Indiana Office of Consumer Counselor; Illinois Industrial Energy Consumers (IIEC); Association of Businesses Advocating Tariff Equity (ABATE); Indiana Industrial Group (IIG); the Louisiana Energy Users Group (LEUG); Texas Industrial Energy Consumers (TIEC); the Coalition of MISO Transmission Customers (CMTC); Southwest Louisiana Electric Membership Corporation and Concordia Electric Cooperative, Inc.; Arkansas Electric Cooperative Corporation (AECC); EDF Trading North America, LLC and EDF Energy Services, LLC; and East Texas Electric Cooperative (East Texas).

16. Additional timely motions to intervene were filed by: the MISO Transmission Owners;[28] Wisconsin Electric Power Company, Wisconsin Public Service Corporation and Upper Michigan Energy Resources Corporation (collectively, WEC Utilities); DTE Electric; Coalition of Midwest Power Producers, Inc. (COMPP); Sierra Club; Consumers

[28] The MISO Transmission Owners for this filing consist of: Ameren, Ameren Illinois, and Ameren Transmission; Big Rivers Electric Corporation (Big Rivers); Central Minnesota Municipal Power Agency; City Water, Light & Power (Springfield, IL); Cleco Power; Cooperative Energy; Dairyland Power Cooperative; Duke Energy Business Services, LLC for Duke Energy Indiana, LLC; East Texas; Entergy Arkansas, LLC; Entergy Louisiana, LLC; Entergy Mississippi; Entergy New Orleans, LLC; Entergy Texas, Inc.; Hoosier Energy Rural Electric Cooperative, Inc.; Indiana Municipal Power Agency; Indianapolis Power & Light Company; Lafayette Utilities System; Minnesota Power (and its subsidiary Superior Water, L&P) (Minnesota Power); Missouri River Energy Services; Montana Dakota Utilities Co.; Northern Indiana Public Service Company LLC; Northern States Power Company, a Minnesota corporation, and Northern States Power Company, a Wisconsin corporation, subsidiaries of Xcel Energy Inc.; Northwestern Wisconsin Electric Company; Otter Tail Power Company; Prairie Power, Inc.; Southern Illinois Power Cooperative; Southern Indiana Gas & Electric Company; Southern Minnesota Municipal Power Agency; Wabash Valley Power Association, Inc.; and Wolverine Power Supply Cooperative, Inc.

Energy; Great Lakes Utilities, Madison Gas and Electric Company, Midwest Municipal Transmission Group, Missouri Joint Municipal Electric Utility Commission, Missouri River Energy Services, Southern Minnesota Municipal Power Agency, Southwest Louisiana Electric Membership Corporation, and WPPI Energy (collectively, Midwest TDU); American Electric Power Service Corporation; Retail Energy Supply Association (RESA); Southern Illinois Power Cooperative (SIPC); Cleco Corporate Holdings LLC; Cleco Cajun LLC; COMPP; Big Rivers; Steel Producers; GridLab; International Transmission Company, Michigan Electric Transmission Company, LLC, and ITC Midwest LLC (collectively, ITC); and Manitoba Hydro.

17. On January 18, 2022, Potomac Economics, Ltd. (Potomac Economics), which is the MISO Independent Market Monitor (Market Monitor), filed a motion to intervene out-of-time.

18. Protests were filed by: the Louisiana Commission; the Mississippi Commission; Alliant; Consumers Energy; Entergy, AECC, and Cleco Power (collectively, Entergy Coalition); Steel Producers; Midwest TDUs; DTE Electric; Ameren; IIEC, ABATE, IIG, LEUG, TIEC, and CMTC (collectively, Industrial Customers); ITC; COMPP; IPL; and East Texas. Comments were filed by: MidAmerican; the Indiana Commission; the Michigan Commission; OMS; Duke Energy; Manitoba Hydro; Entergy; Great River Energy; WEC Utilities; the MISO Transmission Owners; Big Rivers, Hoosier, and SIPC (collectively, Joint Commenters); CGA, Sierra Club, Sustainable FERC Project, and NRDC, Fresh Energy, GridLab, ACP, and SEIA (collectively, Clean Energy Coalition); Minnesota Power; and Potomac Economics.

19. On February 10, 2022, MISO filed a motion for leave to answer and answer to comments and protests (MISO February 10 Answer). Motions for leave to answer and answers to the MISO February 10 Answer were filed by: Alliant; the Mississippi Commission; Midwest TDUs (Midwest TDUs February 25 Answer); WEC Utilities; Entergy; and Industrial Customers.

IV. Deficiency Letter and Deficiency Letter Response

20. On March 9, 2022, Commission staff issued a deficiency letter and requested additional information. On April 8, 2022, MISO filed a response to the deficiency letter (Deficiency Letter Response).

V. Notice of Deficiency Letter Response and Responsive Pleadings

21. Notice of MISO's Deficiency Letter Response was published in the *Federal Register*, 87 Fed. Reg. 22,529 (Apr. 15, 2022), with interventions and protests due on or before April 29, 2022. Timely comments were filed by: Alliant; Consumers Energy; Minnesota Power; Entergy; Clean Energy Coalition; Duke Energy; and Potomac

Economics. Timely protests were filed by: DTE Electric; Industrial Customers; and Midwest TDUs. On May 4, 2022, the Mississippi Commission filed a late protest.

22. On May 20, 2022, MISO filed a motion for leave to answer and answer to the comments and protests of its Deficiency Response (MISO May 20 Answer). On June 6, 2022, Midwest TDUs filed a motion for leave to respond and response to the MISO May 20 Answer (Midwest TDUs June 6 Answer).

VI. Discussion

A. Procedural Matters

23. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2021), the notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

24. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d), we grant Potomac Economics' late-filed motion to intervene, given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay. In addition, we will accept the late-filed protest of the Mississippi Commission, as this will not unduly delay the proceeding or cause undue prejudice to any party.

25. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2021), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. We accept the answers because they have provided information that assisted us in our decision-making process.

B. Substantive Matters

26. As discussed below, we find MISO's proposal to be just, reasonable, and not unduly discriminatory or preferential. Accordingly, we accept MISO's proposed Tariff revisions, effective September 1, 2022, as requested, subject to condition.[29] Below, we address MISO's proposal to: (1) implement a seasonal resource adequacy construct; (2) accredit certain resources using the SAC methodology; and (3) require replacement of any Planning Resource that will be on planned outage or planned derate for more than 31 days in a Season which they are designated for Resource Adequacy Requirements. We

[29] The United States Court of Appeals for the District of Columbia Circuit has held that, in certain circumstances, the Commission has "authority to propose modifications to a utility's [FPA section 205] proposal *if the utility consents to the modifications*." *NRG Power Mktg., LLC v. FERC*, 862 F.3d 108, 114-15 (D.C. Cir. 2017).

also address concerns regarding MISO's stakeholder process, as well as other comments raised in the pleadings.

1. Seasonal Resource Adequacy Construct

a. MISO Filing

27. MISO states that, under the proposed seasonal resource adequacy construct, MISO will perform an LOLE evaluation to establish Reserve Requirements for all Market Participants representing LSEs and Local Clearing Requirements for all Zones on a seasonal basis for four Seasons: Summer; Fall; Winter; and Spring. MISO further states that it will then conduct the Auction and establish an Auction Clearing Price for each Zone for each Season. MISO explains that it will continue to conduct the Auction annually, in the Spring preceding the applicable Planning Year, but the Auction will clear the requirements separately for each Season.[30]

28. MISO states that shifting to a seasonal resource adequacy construct is designed to ensure that resources with needed capabilities and attributes will be available during the highest risk periods across the Planning Year. MISO explains that the current resource adequacy construct is based on the Summer Coincident Peak Demand forecasts, and, as a result, actual needs outside the Summer Season are not explicitly determined and defined, leaving potential risks unmitigated.[31] MISO contends that moving to a seasonal resource adequacy construct will align seasonal resource accreditation with seasonal resource availability to meet MISO's changing risk.[32]

29. MISO proposes to develop seasonal values for several construct parameters, including: (1) LOLE sub-annual modeling; (2) Planning Reserve Margin and Reserve Requirements; (3) Local Reliability Requirements and Local Clearing Requirements; and (4) Capacity Import Limits and Capacity Export Limits.[33]

30. MISO proposes changes to the modeling and methodology of the LOLE study to more accurately model seasonally sensitive variables and calculate resource adequacy construct parameters through: (1) seasonal LOLE risk allocation; and (2) improving seasonal LOLE modeling, including the modeling of planned outages, modeling of non-firm external imports, and hourly modeling of intermittent resources. MISO submits that

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[30] Transmittal at 10-11.

[31] *Id.* at 11 (citing Tab E (Testimony of Scott Wright), at 13 (Wright Test.)).

[32] *Id.* (citing Tab D (Testimony of Jameson Smith, at 18 (Smith Test.)).

[33] *Id.* at 11-12.

this new LOLE model needs to have a defined LOLE threshold for each Season to calculate seasonal resource adequacy Reserve Requirements, which will be determined under a two-step LOLE analysis. MISO states that, in the first step, the LOLE model will be solved to an annual LOLE value of 0.1 day per year to determine the natural LOLE distribution. MISO explains that, if after the first step there is a minimum of 0.01 day per year LOLE in all four Seasons, then the seasonal requirements will be determined directly from this step and there will be no need for additional analysis. MISO states that, if the first step determines that a Season has an LOLE of less than 0.01 day per year, then an additional step will be performed to solve that Season to an LOLE of 0.01 day per year. MISO states that in the second step, MISO will round LOLE targets up to a minimum of 0.01 day per year for any Season with an LOLE less than 0.01 day per year, and to maintain LOLE targets for Seasons with an LOLE greater than 0.01 day per year.[34]

31. MISO states that, to determine a Planning Reserve Margin for the four Seasons, MISO proposes performing an additional two-step LOLE analysis with seasonal input assumptions. MISO explains that the LOLE model will be used to meet the seasonal LOLE targets, which can differ from the annual LOLE target, by adjusting the capacity within the seasonal model up or down as needed.[35] MISO explains that, once the seasonal LOLE targets are met, the seasonal Planning Reserve Margin values in terms of UCAP will be calculated and expressed as a percentage of seasonal coincident peak demand. MISO states that the Planning Reserve Margin for each Season is multiplied by the 50/50 forecast of coincident peak load to determine the Reserve Requirements (in MW) for that Season.[36]

32. MISO asserts that, to determine zonal Local Reliability Requirements, MISO proposes using the same two-step process as the Planning Reserve Margin analysis with each Zone treated as an isolated system consistent with the existing Local Reliability Requirements analysis methodology under the current annual resource adequacy construct. MISO explains that seasonal Local Reliability Requirements values will be calculated in terms of UCAP and expressed as a percentage of seasonal zonal coincident peak demand once the model has been solved to the appropriate LOLE targets. MISO

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[34] *Id.* at 12.

[35] MISO states that if the LOLE is less than the target for a Season, then a "perfect unit" with a negative capacity value and zero forced outage rate will be added to the model. If the LOLE is greater than the target for a Season, then proxy combustion turbine generators of typical size (160 MW) and class average Equivalent Forced Outage Rate Demand (XEFORd) will be added to the model until the seasonal LOLE target is achieved. *See* Transmittal at 12-13; McFarlane Testimony at 11-12.

[36] Transmittal at 12-13.

states that the seasonal Local Reliability Requirements values will be used to determine the seasonal Local Clearing Requirement values by subtracting the seasonal Capacity Import Limited from the seasonal Local Reliability Requirement.[37]

33. MISO proposes to modify its existing determination of Capacity Import Limits and Capacity Export Limits capturing the seasonal variation of transfer limits for each Zone to account for four seasons. MISO explains that Planning Year seasonal peak power flow models and input files developed from MISO Transmission Expansion Plan studies will be used to perform transfer analyses for each Season including Summer Peak, Fall Peak, Winter Peak, and Spring Peak study models. MISO states that the resulting seasonal Zonal Import Ability,[38] in conjunction with controllable exports, will be used to determine the seasonal Local Clearing Requirements for each Zone.[39]

34. MISO contends that the proposed resource adequacy construct more accurately represents resource capabilities at different times during the year, improves certainty of resource availability outside the Summer Season, provides better incentives for resources to be available when needed, establishes seasonal reserve requirements that better align with risks, and delivers additional visibility into risks throughout the Planning Year. According to MISO, these advantages are not currently captured in the annual construct. MISO adds that, in general, resource owners and LSEs benefit from lower non-Summer peak loads, resulting in lower non-Summer Reserve Requirements that reduce the required cleared capacity and allow for seasonal resource operation and related cost savings to loads.[40]

35. MISO states that the Auction will continue to be administered in the spring of each year, and that, in most cases, the process will remain the same but will be applied on a seasonal basis rather than on an annual basis. MISO explains that the Auction offer window will continue to be the last four business days in March. MISO states that the "must offer" requirement for resources that clear the Auction will only apply in the Season or Seasons in which the resource clears. Finally, MISO notes that it will increase

[37] *Id.* at 13.

[38] MISO defines Zonal Import Ability as "[t]he ability of a[] [Zone] to import capacity from areas outside of that [Zone]. MISO, FERC Electric Tariff, Module A § 1.Z (38.0.0).

[39] Transmittal at 13.

[40] *Id.* at 13-14.

the time available to clear the Auction from 10 to 20 business days in order to clear the four Seasonal auctions.[41]

36. MISO proposes to modify its market monitoring and mitigation provisions in Module D of the Tariff. With regard to physical withholding provisions, MISO proposes to remove provisions that prohibit resources that expect to be on outage for more than 90 of the first 120 days of the Planning Year to participate in the Auction and replace that with a provision that states that a Market Participant with a resource that has submitted an outage for more than 31 days of a given Season can ask the Market Monitor for a determination ahead of the Auction allowing it to forego offering excess ZRCs from the resource into the Auction, without being deemed to have engaged in physical withholding. MISO states that the threshold for economic withholding remains at 10% of daily Cost of New Entry (CONE),[42] but MISO expects that more resources will request facility-specific Reference Levels or use Default Technology Specific Avoidable Costs to help ensure they can cover the costs when they might only clear for one Season, rather than the full Planning Year under the current construct.[43] MISO notes that the threshold for economic withholding remains at $0/MW-day when a resource offers at a facility-specific Reference Level.[44]

37. MISO states that, under the proposed seasonal construct, there are rare circumstances that could result in over or underpayment to Planning Resources. MISO's proposal includes an ex-post adjustment to reduce the Auction Clearing Price when more than one Season clears in ZRC Shortage Conditions or ZRC Near-Shortage Conditions.[45] If this occurs, the final Auction Clearing Price will be set based on annual CONE and the

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[41] *Id.* at 14.

[42] Cost of New Entry (CONE) is the "capital, operating, financial and other costs of acquiring a new Generation Resource within the Transmission Provider Region for any designated [Zone]." MISO, FERC Electric Tariff, Module A § 1.C (67.0.0).

[43] In MISO, facility-specific Reference Levels may be established for certain Planning Resources if a market participant provides documentation of going-forward costs of keeping a Planning Resource in operation or going-forward costs of returning a Planning Resource from suspension. *See* MISO, FERC Electric Tariff, Module D § 64.1.4(f) (65.0.0).

[44] Transmittal at 21.

[45] ZRC Near-Shortage Conditions occur in a Zone in any Season that has sufficient volume of ZRC Offers to cover that Zone's Reserve Requirements, but the Season's Auction Clearing Price is greater than the daily CONE value. *See* MISO, FERC Electric Tariff, Module A, § 1.Z (40.0.0) (proposed).

number of days in all applicable Seasons when a Zone clears below the required number of ZRCs or the Season's initial Auction Clearing Price clears above daily CONE. MISO explains that, to address this potential risk, MISO proposes enhancements to the offer caps in the seasonal Auctions and will add the ZRC Offer Revenue Sufficiency Guarantee Credit, a make-whole payment provision, to ensure that resources that clear the Auction recover the costs reflected in their seasonal offer, while also ensuring that the LSEs are not exposed to Auction Clearing Prices and capacity charges that amount to multiples of the annual CONE value as a result the proposed seasonal construct.[46] MISO states that charges to fund the ZRC Offer Revenue Sufficiency Guarantee Credit will be allocated to Market Participants representing LSEs in the Zone(s) experiencing shortage or near shortage conditions *pro rata*, based on their respective LSEs' share of the Reserve Requirement within the Zones during the Season or Seasons where the Auction Clearing Prices were reduced.[47]

b. Comments and Protests

38. Some commenters note that MISO's proposal supports resource adequacy throughout the 12-month Planning Year by recognizing that MaxGen Events are occurring more frequently outside of the Summer Season, and by providing for a more granular assessment of risk across the year.[48] OMS states that MISO's proposal builds on previously accepted Tariff provisions and modifies them to fit the proposed seasonal construct.[49] The Indiana Commission states that a more granular assessment of risks across the year will allow MISO to plan and provide for each Season's own unique reliability needs.[50] ITC states that the use of a four-Season construct will allow MISO to anticipate the supply needs of its members and ensure reserves to meet demand during all hours of the year.[51] Manitoba Hydro argues that the proposal will continue to allow and encourage bilateral trade, diversity exchange agreements, and external participation in

[46] Transmittal at 21-22.

[47] *Id.* at 22.

[48] Michigan Commission Comments at 3; OMS Comments at 3-4; Manitoba Hydro Comments at 2; Indiana Commission Comments at 3-5; ITC Comments at 3.

[49] OMS Comments at 4.

[50] Indiana Commission Comments at 4-5.

[51] ITC Comments at 3.

MISO, which it argues reduce overall costs to consumers and enhances overall grid security.[52]

39. Potomac Economics supports MISO's proposal to transition to a seasonal capacity market, and believes it is an improvement over MISO's current market design and rules.[53] Potomac Economics states that moving to a seasonal resource adequacy construct will provide suppliers better incentives to satisfy the unique needs of each Season while also allowing MISO the flexibility to establish market requirements on a seasonal basis and is better aligned with reliability needs.[54]

40. Potomac Economics explains that, compared to an annual construct, resources retiring mid-year would have more flexibility to select a retirement or suspension date without having to procure significant replacement capacity to satisfy post-retirement capacity obligations. Potomac Economics states that, over time, as new resources enter the market with distinct seasonal output patterns, such as intermittent wind and solar, the value of procuring capacity seasonality will rise.[55]

41. While Potomac Economics supports the transition to a seasonal construct, it suggests that conducting four simultaneous auctions unnecessarily increases uncertainty regarding the supply and demand for capacity in any given Season. Potomac Economics contends that sequential, rather than simultaneous, auctions would allow the decisions and offers in the remaining Seasons to be informed by results of the initial Seasons. Potomac Economics submits that this can be highly beneficial for suppliers that are making retirement and/or suspension decisions based on the seasonal capacity auctions they clear. As an example, Potomac Economics states that a resource that clears in the Summer Auction and covers its going-forward costs is likely to be willing to offer at a lower price in the remaining Seasons than in a simultaneous auction where the supplier is uncertain in which Season(s) the resource will clear, if any. Potomac Economics states that likewise, a supplier considering a suspension or seasonal shutdown may make a different decision or offer at the different level in one Season depending on whether the resource cleared in the prior Season.[56]

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[52] *Id.*

[53] Potomac Economics Comments at 2.

[54] *Id.*

[55] *Id.* at 3-4.

[56] *Id.* at 5.

42. East Texas states that it has repeatedly asked MISO to substantiate how the shift from an annual to a seasonal construct, with discrete Reserve Requirements for all LSEs, would enhance resource availability and forestall unnecessary capacity market shortfalls within MISO, and that MISO has failed to provide adequate data to justify its proposal. East Texas alleges that MISO instead attempts to justify its proposal with generalized and nebulous assertions concerning the supposed advantages of a more granular construct in mitigating reliability risks in non-Summer months. East Texas states that, for example, it requested MISO to provide a simulation showing how MISO's seasonal construct proposal would have strengthened MISO's response to Winter Storm Uri in February 2021 or any other non-Summer event in recent years. East Texas further states that it asked MISO to provide cost-benefit analyses illustrating how the seasonal construct's supposed advantages in mitigating reliability risks within the MISO footprint compared to the costs that this new capacity procurement paradigm would inflict on market participants representing LSEs, which MISO failed to do.[57]

43. East Texas alleges that MISO repeatedly invokes the specter of an impending reliability crisis, while asserting that its seasonal construct would address this crisis by mitigating MISO's reliability risks during the non-Summer months. East Texas argues that MISO fails to show why it could not employ more targeted reforms, nor does MISO specify what benefits this policy would garner for MISO market participants and other stakeholders. East Texas asserts that MISO should not be allowed to effect a broad overhaul of its capacity market without marshaling greater evidence of the ostensible benefits and impacts such a critical reform would yield, and, given the claimed benefits of MISO's seasonal construct as speculative and lacking in factual support, that the Commission should reject MISO's filing and instruct MISO to return to the stakeholder process to revise a better substantiated solution to its claimed resource adequacy challenges.[58]

44. Clean Energy Coalition argues that MISO has not explored whether the increased complexity of the proposal is manageable as part of utility planning processes. Clean Energy Coalition argues that, if LSEs cannot effectively plan to meet seasonal capacity requirements along the timeline contemplated, the proposal will result in building higher amounts of capacity than needed.[59]

45. Alliant states that generation investments are long-term decisions that require years of planning and implementation to bring a new resource online, and MISO's proposal does not provide market participants with timely actionable information to allow

[57] East Texas Protest at 4-5.

[58] *Id.* at 5.

[59] Clean Energy Coalition Protest at 17.

generation owners to make informed investment decisions. Alliant asserts that it is now put in the untenable position of potentially making inefficient resource planning decisions in the near-term in order to fall in line with MISO's unsubstantiated and overly conservative Planning Reserve Margins. Alliant submits that delaying the implementation date to no sooner than the 2024/2025 Planning Year will allow capacity resource owners time to reconfigure their resource plans and portfolios and for MISO to provide a reasonable path to obtain seasonal interconnection rights.[60]

46. Several protestors contend that MISO's proposed market structure lacks mitigation to ensure just and reasonable Auction revenues. Clean Energy Coalition and Midwest TDUs contend that there are multiple scenarios in which annual capacity revenues could be expected to exceed the current maximum Auction price of CONE, potentially due to one tight Season, thereby potentially resulting in a resource setting a Season's Auction Clearing Price at four times the current annual Auction's maximum price, and generating greater auction revenue from all four Seasons than is permitted under the current annual Auction.[61] Clean Energy Coalition argues that, even though MISO takes steps to mitigate the likelihood of price spikes in certain Zones for certain Seasons, MISO's proposal goes out of its way to establish the ZRC Offer Revenue Sufficiency Guarantee Credit to protect generation owners from any risk from Auction Clearing Price reductions.[62] Clean Energy Coalition states that, while it makes sense in theory to insulate capacity owners that may be forced to provide capacity while being paid less than they bid into the market, these make-whole payments will come from LSEs and their ratepayers and are defined in part by facility-specific Reference Levels that are calculated independently through a process involving the Market Monitor. Clean Energy Coalition argues that MISO has not provided enough information to justify the make-whole payment process and argues that ongoing tracking and evaluation of the market adjustment make-whole payment system is necessary.[63] Midwest TDUs add that MISO's ex post adjustment to Auction Clearing Prices proposal produces higher auction revenues when there are fewer Seasons in shortage conditions.[64]

47. Midwest TDUs contend that, because MISO has not demonstrated that allowing annual Auction revenues above annual CONE, and potentially more than double annual

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[60] Alliant Protest at 7-8.

[61] Clean Energy Coalition Protest at 14; Midwest TDUs Protest at 38-40.

[62] Clean Energy Coalition Protest at 14.

[63] *Id.* at 15.

[64] Midwest TDUs Protest at 41.

CONE, is just and reasonable, the Commission should reject MISO's filing.[65] Midwest TDUs state that the current, Commission-approved cap for annual capacity supply offers in the Auction and the price for shortage conditions all treat annual CONE as the appropriate capacity price signal. Midwest TDUs submit, however, that, under MISO's proposal, if a resource that clears in just one Season sets the price for that Season at MISO's offer cap, other resources that clear in multiple Seasons could recover well above annual CONE. Midwest TDUs add that, if revenues above annual CONE produce over-recovery for individual resources, total Auction revenues above annual CONE would produce over-recovery on a much greater scale.[66]

48. Midwest TDUs suggest that MISO is attempting to minimize the potential for over-recovery by relying on the unlikelihood of such an event occurring, and contend that this is contrary to MISO's stated basis for the present filing, which is to address, among other things, shrinking excess margins. Midwest TDUs argue that, if a shift to a seasonal reliability construct is necessary to ensure adequate capacity, MISO cannot ignore the risk of inadequate capacity in the mitigation component of its proposal.[67]

49. Midwest TDUs argue that MISO claims that existing Tariff provisions to determine facility-specific Reference Levels are sufficient because "[s]uch Reference Levels have historically accounted for a small fraction of ZRC Offers in the annual [Auctions]."[68] Midwest TDUs suggest that this is contradicted by a different MISO statement that MISO "expect[s] that more resources will request facility-specific Reference Levels."[69] Midwest TDUs submit that this means that MISO expects that offers above the economic withholding thresholds will comprise a larger fraction of offers in the seasonal auction, weakening the protection of the initial economic withholding threshold and potentially driving up prices. Midwest TDUs further argue that the availability of make-whole payments that ensure cost-recovery for resources clearing in a single Season may also create incentives for resources to clear in just one Season and be relieved of the must-offer obligation in other Seasons, again potentially driving up prices.[70]

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[65] *Id.* at 44.

[66] *Id.* at 41-42.

[67] *Id.* at 42.

[68] *Id.* at 42-43 (citing McFarlane Test. at 42).

[69] *Id.* at 43 (citing McFarlane Test. at 51).

[70] *Id.* at 42-43.

50. Midwest TDUs claim that the proposed Tariff language does not appear to mitigate auction prices in the way described in the McFarlane Testimony. Midwest TDUs state that, according to the McFarlane Testimony, MISO would adjust auction prices "when more than one Season clears in ZRC Shortage Conditions or ZRC Near-Shortage Conditions."[71] However, Midwest TDUs note that revisions to Tariff section 69.A.7.1.c.x. state that MISO will adjust prices in two situations: (1) in Zones "with Seasons in ZRC Shortage Conditions," and (2) in Zones "with Seasons in ZRC Near-Shortage Conditions."[72] Midwest TDUs contend that this language does not appear to cover Zones with one Season in shortage conditions and one Season in Near-Shortage conditions and thus creates a gap in mitigation that could allow for two Seasons that each have prices producing revenues equal to annual CONE, allowing for total auction revenues that are more than double annual CONE.[73]

51. Alliant, East Texas, and Entergy Coalition raise concerns with MISO's proposed implementation schedule. East Texas points out that, should the Commission accept MISO's proposal within MISO's requested time frame, LSEs would have approximately 15 months before the proposal takes effect in June 2023. East Texas submits that generation owners would not have time to assess the impacts to their generation fleets, adjust their operations and planning functions to accommodate this new accreditation paradigm, and negotiate any necessary amendments to existing power supply agreements.[74] Alliant argues that MISO's request to implement the new construct in less than a year between filing the proposal and MISO's proposed September 1, 2022 effective date does not reflect the realities of the conditions under which MISO stakeholders and generation owners must operate, given the length of time required to get capacity projects through MISO's interconnection process.[75] East Texas and Entergy Coalition contend that LSEs will not have sufficient time to effectuate any significant generation or transmission investments to enhance their capacity positions, which could result with customers facing elevated prices in the Auction for several years.[76]

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[71] *Id.* at 43-44 (citing Tab C (Testimony of Shawn McFarlane), at 41 (McFarlane Test.)).

[72] *Id.* at 44 (citing MISO, FERC Electric Tariff, Module E-1, § 69A.7.1.c.x (45.0.0) (proposed)).

[73] *Id.*

[74] East Texas Protest at 7.

[75] Alliant Protest at 5-6.

[76] East Texas Protest at 7; Entergy Coalition Protest at 21-22.

52. Some commenters protest MISO's proposed methodology to determine seasonal Planning Reserve Margins and Reserve Requirements. Entergy Coalition submits that, while MISO states that one of the benefits MISO expects to achieve with the proposal is lowering non-Summer resource adequacy requirements, MISO's proposal fails to accomplish this goal. Entergy Coalition states that data provided by MISO during the stakeholder process indicates that under MISO's proposal many of the LSEs in MISO South would have Spring Reserve Requirements that are higher than their Summer requirements. Entergy Coalition states that, given that the Spring Season is traditionally considered an off-peak Season in MISO South during which significant maintenance outages are taken, this outcome is counterintuitive and would create significant planned maintenance scheduling challenges for these LSEs.[77]

53. Similarly, the Mississippi Commission argues that the proposal would decrease Zone 10's surplus generation by between 721 MW and 1,621 MW, depending on the Season, and cause economic hardship for Mississippi retail customers.[78] The Mississippi Commission states that, if Zone 10 does not have enough capacity to meet its Local Clearing Requirement, Entergy Mississippi's retail customers would be subjected to seasonal penalties of tens of millions of dollars; an amount that, according to the Mississippi Commission, negates the estimated net positive benefit of Entergy Mississippi's participation in MISO.[79]

54. Alliant argues that MISO's Planning Reserve Margin for non-Summer results is unnecessarily high. Alliant explains that MISO proposed to stakeholders the use of a 7.1% Planning Reserve Margin for the Summer Season, while Planning Reserve Margins for the non-Summer Seasons were between 14% and 22%. Alliant states that it is concerned that the non-Summer Planning Reserve Margins are driven by arbitrary inputs without a supporting sensitivity analysis. Alliant requests that the Commission delay implementation of MISO's filing until MISO can provide robust analysis for why Planning Reserve Margins in non-Summer months need to be excessively conservative for purposes of reliability.[80]

55. Alliant notes that MISO proposes to use a non-Summer LOLE as conservative as 0.1 day in 10 years, even though MISO currently uses a LOLE target of 1 day in 10 years. Alliant contends that using such a conservative assumption drives non-Summer capacity obligations to near-Summer requirements, despite lower load levels. Alliant

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[77] Entergy Coalition Protest at 19.

[78] Mississippi Commission Protest at 30-31.

[79] *Id*. at 30.

[80] Alliant Protest at 9-10.

states that, while the evolution of the generation portfolio may increase risk for Winter and other non-Summer Seasons, MISO's overly conservative assumptions and constrained implementation deadline will needlessly drive inefficient resource plans. Alliant states that Winter peak load in MISO is approximately 85% of Summer peak load, but Winter capacity requirements are approximately 93% of the Summer Reserve Requirements. Alliant contends that, as a result, MISO's approach to non-Summer Seasons does not accommodate efficiency gains for seasonal conditions in the generation portfolio.[81]

56. The Mississippi Commission argues that MISO's proposed CONE penalty does not promote resource adequacy because, according to the Mississippi Commission, MISO proposes to apply a total penalty of 100% CONE on a deficient LSE regardless of whether it is deficient for one Season or multiple.[82] The Mississippi Commission states that, if an LSE is deficient in multiple Seasons, MISO would impose fractions of the CONE penalty so that at the end of the year, the penalty would be the same amount. The Mississippi Commission states that this sends the message that, if an LSE is deficient for one Season, there is no need to cure that deficiency for subsequent Seasons. Further, the Mississippi Commission asserts that, if an LSE is informed that it will be deficient, there is not enough time to construct a new generating facility before MISO's proposed effective date, and the utility's retail customers will be subject to unreasonable penalty charges.[83]

57. Clean Energy Coalition argues that MISO's showing that risk occurs throughout the year does not necessarily demonstrate that the proposed seasonal construct would provide better reliability than the current annual construct.[84] Clean Energy Coalition argues that the proposed solution is not sufficient for addressing resource adequacy for a system with greater penetrations of energy limited resources and that MISO has not evaluated its proposed design under a renewable heavy scenario.[85]

58. Clean Energy Coalition asserts that MISO has not provided any data to demonstrate that its metrics to identify risk hours align with realized loss of load risk. Clean Energy Coalition states that MISO has not conducted a system-level loss of load

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[81] *Id.* at 10.

[82] Mississippi Commission Protest at 7.

[83] *Id*. at 7-8.

[84] Clean Energy Coalition Protest at 18.

[85] *Id.* at 18-19.

modeling analysis of a technically high quality to assess the periods or hours in which there is greatest risk of not serving load.[86]

59. Clean Energy Coalition argues that MISO's LOLE modeling lacks an accurate assessment of weather-related risks, which, according to Clean Energy Coalition, is necessary to understand whether MISO's proposal ensures reliability under a potentially radically different resource mix.[87] Clean Energy Coalition contends that MISO's flawed method to extrapolate wind and solar datasets to periods of synthetic load results in non-time synchronized data, and does not correctly identify periods where the combination of high loads and low wind and solar output create system risk.

60. Clean Energy Coalition argues that the assumption that solar or wind profile shape on a given day is a function of MISO-wide temperature data for nearby calendar days from other days is physically invalid. Clean Energy Coalition contends that correlating wind profiles to MISO-wide minimum temperature for November through March and MISO-wide maximum temperature for April through October is not substantiated, has no physical basis, and cannot possibly predict local wind speeds.[88] Clean Energy Coalition also argues that cloud cover is a much greater determinant of solar output than temperature and notes that there is a weak correlation between the two.[89] Clean Energy Coalition states that the validation provided by MISO indicated a poor match between actual and synthesized shapes even after smoothing for averaging. Clean Energy Coalition argues that the tails of the distribution in figures presented to validate the appropriateness of this method indicate a poor match between actual and simulated data during high load periods.[90] Clean Energy Coalition further argues that data presented for wind generation does not match regional attributes, as the average generation is low relative to current technology expectations and the diurnal shape is inconsistent with reality.[91] Finally, Clean Energy Coalition argues that methods used to develop future wind and solar generation profiles for the 2025 interconnection queue receive only

[86] *Id.* at 12.

[87] *Id.*

[88] *Id.*

[89] *Id.*

[90] *Id.*

[91] *Id.* at 13.

cursory mention and the information provided indicates that these methods do not capture physical processes or expected diversity increases in a meaningful way.[92]

c. MISO February 10 Answer

61. In response to comments about seasonal capacity prices, MISO argues that its proposal adequately mitigates against excessive prices in the seasonal Auctions. MISO explains that annual Auction revenue can only approach 1.75x CONE when one Season clears at CONE and the others clear just below 10% of CONE (approximately $250/MW-day), in which case the Auction Clearing Price is adjusted per the proposal.[93]

62. In response to the Mississippi Commission's assertion that MISO's proposal would convert Entergy Mississippi's capacity surplus into a shortage, MISO submits that the Mississippi Commission fails to recognize inherent differences in Seasonal Local Clearing Requirement positions that are driven by a number of factors, including resource performance and availability, load profiles, and Capacity Import Limits for each Season. MISO states that the current annual zonal Local Clearing Requirement positions are derived from Summer-focused assumptions and do not accurately reflect the seasonality of resource capabilities, load, and transfer capabilities under seasonal system conditions.[94] MISO argues that, compared to the overall average resource performance at the footprint level, Zone 10 resources have lower availability and are expected to see a reduction in their accredited values under the proposal to better reflect their reliability contribution during times of need. MISO states that, although varying levels of reduction in Zone 10 resource accredited values are projected for each Season, the projected seasonal zonal positions remain to be surpluses, not shortages, under the set of analysis parameters presented in the November 3, 2021 Resource Adequacy Subcommittee (RASC) meeting.[95]

63. In response to Alliant's argument that MISO's approach to set LOLE targets for non-Summer Seasons is overly conservative and drives non-Summer requirements to "near-Summer" requirements, MISO contends that Alliant fundamentally mischaracterizes MISO's proposal of defining seasonal LOLE targets in determining seasonal reserve requirements. MISO submits that its approach aims to set seasonal requirements reasonably while keeping the annual LOLE for the Planning Year largely close to 0.1 day per year. MISO states that this is accomplished by rounding LOLE

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[92] *Id.*

[93] MISO February 10 Answer at 44.

[94] *Id.* at 41-42.

[95] *Id.* at 42.

targets up to a minimum of 0.01 day per year for any Season(s) with an LOLE less than 0.01 day per year and maintaining LOLE targets for the Seasons with an LOLE greater than 0.01 day per year. MISO further states that Alliant fails to recognize that seasonal Planning Reserve Margins are in terms of percentage and seasonal peak demand forecasts will be applied to determine the MW requirements for each Season. MISO states that Reserve Requirements for non-Summer Seasons tend to be significantly lower than the Summer MW reserve requirement.[96]

64. In response to Clean Energy Coalition's assertion that MISO has not performed a system wide LOLE analysis of a technically high quality to assess loss of load risks, MISO states that it has enhanced its LOLE modeling to better reflect the seasonality of various types of resource capabilities, including seasonal forced outage rates with cold weather adjustments, a probabilistic representation of non-firm external support, and multi-year hourly wind and solar profiles. MISO explains that it has also spent many months conducting a suite of high-fidelity LOLE risk analysis under both current resource portfolio and a broad range of future resource portfolio scenarios to gain a good understanding of changing reliability risk profiles with the evolving resource portfolio. MISO further explains that it used historical hourly wind outputs for recent weather years from 2011 to 2019 to develop correlations between historical wind output and temperature/load to ensure the variation of wind output as a function of load is well represented. MISO argues that its approach to developing synthetic wind profiles for 1990-2010 reasonably captures the historical variability and volatility around the synthetic load shapes by developing a similar distribution of wind outputs as a function of the 1990-2010 load shapes as seen in the 2011-2019 load and wind shapes where actual historical wind outputs are available. MISO explains that, similarly, hourly solar profiles from 1998 to 2019 generated using the NREL National Solar Radiation Databased Data Viewer were used to develop synthetic solar profiles for 1990 to 1997 weather years to maintain a similar relationship between load and solar outputs as seen in the 1998 to 2019 time frame.[97]

d. Answers to MISO February 10 Answer

65. Midwest TDUs argue that MISO did not explain how its proposed departure from using annual CONE as the capacity price signal and the resulting excessive seasonal Auction prices and revenues allowed under its proposal are just and reasonable.[98] Midwest TDUs state that MISO concedes that its proposal could result in annual auction

[96] *Id.*at 44-45.

[97] *Id.* at 45-46.

[98] Midwest TDUs Answer at 26-27.

revenues that approach 1.75x CONE.[99] Regarding the calculation of Auction prices, Midwest TDUs assert that, if MISO intends to adjust Auction prices when there is more than one Season in or near shortage conditions, then the Tariff should make that clear.[100] According to Midwest TDUs, MISO fails to adequately mitigate unreasonable and unjust capacity prices, and its proposal actually produces less annual Auction revenue when more Seasons are in or near shortage conditions.[101]

66. Alliant states that MISO's February 10 Answer shows that non-Summer Reserve Requirements will be nearly as high as Summer Reserve Requirements, which Alliant contends could lead to inefficient resource planning based on overly conservative assumptions.[102] Alliant requests that the Commission delay implementation of the MISO proposal until MISO provides analysis to support the Planning Reserve Margins proposed in non-Summer months.[103]

e. Deficiency Letter Response and Responsive Pleadings

67. As noted above, on March 9, 2022, Commission staff issued a deficiency letter and requested additional information, and MISO submitted its Deficiency Letter Response on April 8, 2022. In response to a question requesting additional support for the proposal to allow Auction revenue to potentially exceed annual CONE, MISO states that it recognized the need to raise the $/MW-day offer cap so that resources only available or only needed in a single Season are still eligible to receive payments up to annual CONE. MISO states that, while this continues to ensure revenue adequacy, it could lead to scenarios where load pays capacity charges in excess of annual CONE. MISO asserts that its proposal mitigates this result by reducing Auction Clearing Prices for shortage and near-shortage Seasons so that, in the aggregate, such Seasons collect revenue up to annual CONE but no more. MISO states that the potential for charges above annual CONE comes from revenues based on the Auction Clearing Price in Seasons that were not in shortage or near-shortage conditions. MISO states that, by

[99] *Id.* at 26 (citing MISO February 10 Answer at 44).

[100] *Id.* at 28.

[101] *Id.*

[102] Alliant Answer at 3.

[103] *Id.*

definition, those prices will always be below the mitigated prices in the shortage or near-shortage conditions, which MISO contends is a reasonable result.[104]

68. In response to a question requesting additional information about the relationship between MISO's LOLE target of 0.01 day per year for each Season and the annual LOLE target of 0.1 day per year, MISO states that the annual 0.1 day per year target is cumulative across all Seasons. MISO states that, after performing the two-step LOLE analysis, it is possible for the summation of the LOLE across all Seasons to equal 0.1 days per year, with some Seasons having LOLE less than 0.01 days per year. MISO explains that, to determine a seasonal requirement for Seasons with LOLE less than 0.01 days per year, a minimum of 0.01 days per year LOLE target for the Season is used because a defined non-zero LOLE target is needed to solve the model. MISO states that the 0.01 days per year target allows the model to converge accurately and without significant computational burden while holding the Season to near 0 LOLE and staying as close as possible to an annual LOLE of 0.1 days per year. MISO submits that a target smaller than 0.01 makes it difficult for the model to converge while a target above 0.01 causes the total LOLE to increase too far beyond the annual 0.1 days per year.[105]

69. MISO states that it provided analysis to market participants indicating that between 14%-27% of approximately 110 market participants would experience higher non-Summer Reserve Requirements than their Summer Reserve Requirements, and that these results are driven by market participants with flatter seasonal load profiles and higher non-Summer MISO-system Planning Reserve Margins. MISO notes that it has yet to collect seasonal coincident peak load forecasts, so that the impact analysis was performed using proxy seasonal coincident peak load forecasts estimated based on seasonal load forecast factors and Summer coincident peak forecasts. MISO states that, as a result, the Reserve Requirement values are subject to change once market participants submit actual seasonal coincident peak load forecasts.[106]

70. Midwest TDUs, Clean Energy Coalition, Entergy, and Alliant submitted comments on MISO Deficiency Letter Response. Midwest TDUs argue that MISO has not justified its proposal to allow Auction revenues in excess of annual CONE. Midwest TDUs contend that the potential for Auction revenues tens of thousands of dollars per MW-year above CONE does not, as MISO claims, protect load from paying capacity charges that are well in excess of annual CONE. Midwest TDUs further argue that MISO

[104] MISO Deficiency Letter Response at 26.

[105] *Id.* at 21.

[106] *Id.* at 22.

does not respond to the fact that MISO's proposal allows for higher Auction revenues as fewer Seasons are in shortage or near-shortage conditions.[107]

71. Clean Energy Coalition states that artificially setting the LOLE seasonal target to 0.01 per year in a Season that has no risk ignores the results from annual LOLE modeling. Clean Energy Coalition argues that, while it agrees with MISO's statement that setting a seasonal LOLE target to 0.01 is the only way to get the model to solve, the model cannot find the Effective Load Carrying Capability (ELCC) of any resource if there is no risk in that Season. Clean Energy Coalition submits that artificially adding risk to a Season that has none, and then accrediting resources for mitigating this artificial risk, is not a just and reasonable approach to maintaining reliability. Clean Energy Coalition adds that, if MISO's modeling approach cannot quantify the risk that demonstrably occurs in all Seasons, then MISO is missing a key improvement necessary to identify reliability risks.[108]

72. Entergy states that MISO's response to a question requesting additional data on how often LSEs will experience higher non-Summer Reserve Requirements demonstrates that up to a quarter of LSEs will not realize one of the primary intended benefits of the seasonal construct as stated by MISO, which is that the seasonal construct will result in lower non-Summer Reserve Requirements, enabling seasonal operation of resources. Entergy argues that MISO's overly broad seasonal risk allocation of the 0.1 LOLE target is flawed and does not obtain the desired outcome of lower non-Summer Reserve Requirements for all LSEs.[109]

73. Alliant contends that MISO's Deficiency Letter Response demonstrates Alliant's initial argument that there are still important details that need to be resolved before implementation of the proposal can occur. Alliant contends that MISO still has not addressed concerns that non-Summer Planning Reserve Margins, which will be potentially two to three times higher than Summer Planning Reserve Margins, are a rational outcome. Alliant states that the higher Planning Reserve Margins for non-Summer Seasons results in Reserve Requirements for non-Summer Seasons that are nearly as high as the Reserve Requirements for the Summer Season, despite significant load differences. Alliant states that MISO has explained the modeling process and challenges with modeling limitations but has not addressed concerns that the proposed

[107] Midwest TDUs Response to MISO Deficiency Letter Response at 27-29.

[108] Clean Energy Coalition Response to MISO Deficiency Letter Response at 8.

[109] Entergy Response to MISO Deficiency Letter Response at 6-7.

obligation determination processes lead to an unreasonable outcome for the Planning Reserve Margin and Reserve Requirements.[110]

74. Alliant asserts that MISO continues to ignore the dramatic impact the seasonal construct will have on short-term portfolio plans. Alliant states that MISO has the data and tools available to assess this impact and could take its conceptual seasonal reserve margin obligations and apply those to the MISO/OMS survey data to illustrate indicative changes in projected capacity positions by year and Season for the footprint and each Zone. Alliant contends that this information is critical for the Commission, MISO, market participants, and state regulators to understand the true forecasted impact of the seasonal construct.[111]

f. MISO May 20 Answer

75. With regard to concerns about Auction revenues exceeding annual CONE, MISO states that its Deficiency Letter Response explained that the proposal mitigates, but cannot fully eliminate, the possibility. MISO states that its proposal strikes a balance between ensuring that resources designated for resource adequacy are revenue adequate even if they are only designated for a single Season, and protecting load from excessive capacity prices above the annual CONE value (expressed in a daily $/MW-day value) across multiple Seasons. MISO states that, under the proposal, a Zone that is short on capacity in all Seasons would pay revenues equal to annual CONE and a resource receiving the Auction Clearing Price in a Zone that is short would receive capacity payments equal to annual CONE. MISO states that, in some cases, where at least one but not all four Seasons are short, CONE would be charged in the short Seasons and additional charges paid in Seasons that were neither short nor near-shortage, driving total capacity charges for the year above CONE. MISO states that, however, in the most extreme case, where one Season is short and the others are close but not quite "near-shortage," then 25% of CONE could be collected in each of the other three Seasons, which would drive the total Auction revenues across the four Seasons to 175% CONE. MISO asserts that this would be highly unlikely but still a reasonable outcome as the Auction would be signaling a shortage in one Season and fairly tight conditions in the rest of the seasons.[112]

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[110] Alliant Response to MISO Deficiency Letter Response at 5.

[111] *Id.*

[112] MISO May 20 Answer at 12-13.

g. Midwest TDUs June 6 Answer

76. Midwest TDUs argue that the MISO May 20 Answer repeats the assertion that it would be a reasonable outcome for total Auction revenues across the four Seasons to be as high as 175% of CONE without explaining why it is appropriate to charge consumers significantly more than CONE, which is the current Commission-approved cap on annual Auction revenues. Midwest TDUs further argue that MISO has not provided any explanation for why Auction revenues well above CONE are an appropriate signal for short or tight capacity conditions. Midwest TDUs state that recent Auction results for the 2023/2023 Planning Year confirm the importance of this aspect of MISO's proposal and the need for the Commission to ensure that consumers do not pay excessive prices.[113]

h. Commission Determination

77. We find MISO's proposal to implement a seasonal resource adequacy construct is just, reasonable, and not unduly discriminatory or preferential. We find that MISO has demonstrated that its proposal would better align resource adequacy requirements with periods of increased risks on the MISO system, which, as MISO demonstrates, increasingly occur outside of the peak Summer Season.[114] Further, by providing a more granular assessment of seasonal resource adequacy needs, MISO's proposal will ensure that LSEs are not required to procure capacity beyond what is necessary to ensure resource adequacy in a given Season. This, combined with MISO's proposal to accredit resources based on their seasonal performance (discussed further in Section IV.B.2 below), will offer further assurance that MISO's resource adequacy provisions are sufficient to mitigate the system's resource adequacy risk throughout the Planning Year. As the Wright testimony explains, MISO's proposal will "incorporate changing risk drivers, including seasonal aspects, into a more precise determination of reliability requirements."[115]

78. In response to East Texas's request that MISO provide evidence that MISO's proposal would have strengthened MISO's response to Winter Storm Uri, we do not believe it is incumbent upon MISO to provide such a counterfactual to demonstrate that its proposal is just and reasonable. Similarly, a cost-benefit analysis is not necessary to evaluate MISO's proposal, but as noted above, we find that MISO has demonstrated that the proposal is likely to benefit MISO customers by enhancing reliability in the region

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[113] Midwest TDUs June 6 Answer at 8-9.

[114] *See* Transmittal at 3 ("Since 2016 MISO has experienced 40 [MaxGen Events] with more than 60% occurring outside of the Summer months.").

[115] Wright Test. at 27.

with a more granular determination of resource adequacy risks that MISO has demonstrated vary throughout the Planning Year.

79. Some protestors prefer that MISO propose alternative, or more targeted, revisions to its resource adequacy construct. However, under FPA section 205, MISO bears the burden to show that its filing is *a* just and reasonable proposal, but need not show that it is the best or most just and reasonable option.[116] Further, we do not find MISO's proposal to be overly complex such that LSEs and other market participants will be unable to understand the new seasonal resource adequacy requirements or unable to plan for the upcoming Planning Year.

80. We disagree with claims that, because it is possible that the annual Auction revenues across all four Seasons can exceed the annual CONE value, MISO's proposal lacks sufficient mitigation to ensure just and reasonable annual Auction revenues. As an initial matter, we do not believe that an Auction construct that allows annual revenues to exceed CONE necessarily renders that construct to be unjust and unreasonable. We note that the Commission has accepted capacity market designs that allow annual auction revenues to exceed Net CONE.[117] As MISO explains, such outcomes will incent new entry in the event the MISO system is short capacity.

81. Further, MISO has proposed to mitigate customer cost impacts to reduce the Auction Clearing Prices in Seasons that clear in ZRC Shortage Conditions or ZRC Near-Shortage Conditions to ensure that, in aggregate, resources that clear the Auction in such Seasons collect revenue up to, but not above, annual CONE. Specifically, MISO's proposal includes an ex-post adjustment to reduce the Auction Clearing Price when more than one Season clears in ZRC Shortage Conditions or ZRC Near-Shortage Conditions. If this occurs, the final Auction Clearing Price will be set based on annual CONE and the

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[116] *City of Winnfield, La v. FERC.*, 744 F.2d 871 at 874-76 (D.C. Cir. 1984); *PJM Interconnection, L.L.C.*, 170 FERC ¶ 61,243, at P 57 (2020) (citing *Petal Gas Storage, L.L.C. v. FERC*, 496 F.3d 695, 703 (D.C. Cir. 2007); *Cities of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984); *Cal. Indep. Sys. Operator Corp.*, 128 FERC ¶ 61,282, at P 31 (2009)). *See also Neb. Pub. Power Dist. v. FERC*, 957 F.3d 932, 943 (8th Cir. 2020) (recognizing that "courts have made it clear that FERC 'restricts itself to evaluating the confined proposal'" and "[t]herefore, FERC 'need only find the *proposed* rates to be just and reasonable.'") (citations omitted).

[117] ISO New England Inc. (ISO-NE) sets the starting price of the Forward Capacity Auction as the higher of CONE or 1.6 times Net CONE. *See* ISO-NE Tariff, § III. 13.2 § 13.2.4 (66.0.0). PJM Interconnection, L.L.C. (PJM) sets the starting price of the Variable Resource Requirement Curve at the greater of CONE or 1.5 times Net CONE. *See* PJM, Tariff, OATT VI, attach. DD § 5.10 (1.0.1).

number of days in all applicable Seasons when a Zone clears below the required number of ZRCs or the Season's initial Auction Clearing Price clears above daily CONE. We find that the potential for outcomes resulting in annual Auction revenues at or exceeding CONE result from MISO attempting to enable sufficient compensation for resources that clear in few Seasons while protecting ratepayers from substantially increased aggregate capacity costs across the Planning Year. Finally, some protestors suggest that, because MISO's proposed ex post adjustments to Auction Clearing Prices may produce higher annual Auction revenues when there are fewer Seasons in shortage conditions, this suggests a fundamental price signaling flaw, inconsistent with supply and demand fundamentals. We disagree. In both scenarios, the total annual revenues demonstrate that MISO is in need of additional capacity and to provide a signal to attract additional resource adequacy investments.

82. We disagree with Midwest TDUs' characterization that MISO justified its facility-specific Reference Levels on the basis that they were rarely used. Rather, MISO was providing context that facility-specific Reference Levels are rarely used in MISO's current construct and that they expect more resource owners to use them, should the Commission accept MISO's proposal. We also disagree that this suggests that MISO expects increased use of facility-specific Reference Levels means that offers above the economic withholding conduct threshold will comprise a larger fraction of offers in the seasonal Auction. We find that nothing in the record indicates that increased use of facility-specific Reference Levels would weaken the protections of MISO's economic withholding conduct thresholds. Further, under MISO's market power mitigation provisions, capacity offers above a resource's economic withholding threshold are not subject to mitigation unless they also cause the Auction Clearing Price to exceed the impact threshold equal to 10% of the Zone's CONE value (or $0/MW-day in Zones where import constraints bind).[118] Therefore, we find MISO's mitigation provisions to be sufficient under MISO's proposed seasonal Auction construct. Similarly, we are also unpersuaded by Midwest TDUs' argument that make-whole payments to resources that only clear one Season may create incentives for resources to clear in only one Season so that they are relieved of the must-offer requirement in other Seasons, as Midwest TDUs does not explain why MISO's mitigation provisions are insufficient to protect against such potential gaming. Specifically, make-whole payments are only provided to resources that do not clear in certain Seasons, and offers in those Seasons are subject to the economic withholding thresholds noted above, including being limited to the facility-specific reference level.

83. We are not persuaded that additional information is required to justify MISO's proposed market adjustment make-whole payment system. Under the seasonal construct, Planning Resources will bid into each Season's Auction the cost of providing capacity in

[118] MISO, FERC Electric Tariff, Module D, § 64.2.1 (45.0.0) (proposed).

that Season. The ZRC Offer Revenue Sufficiency Guarantee Credit make-whole payments provide two important benefits: (1) they ensure that capacity sellers are not required to provide capacity at a loss; and (2) they shield consumers from excessive prices.

84. However, we agree with Midwest TDUs' claim that MISO's proposed Tariff language is inconsistent with MISO's statements and the McFarlane Testimony. Proposed Tariff section 69A.7.1.c.x states:

> The final Auction Clearing Price [] for a [Zone]. . .with Seasons in ZRC Shortage Conditions will be set as the amount obtained by dividing the applicable [Zone's] annual CONE value by the number of days in Seasons which the [Zone was] . . .in ZRC Shortage Conditions and ZRC Near-Shortage Conditions in the [] Auction. The final Auction Clearing Price [] for a [Zone]. . . with Seasons in ZRC Near-Shortage Conditions will be set as the minimum of: (a) the original [Auction Clearing Price] as determined in section 69A.7.1.c.(v) or section 69A.7.1.c.(vi) as applicable; or (b) the amount obtained by dividing the applicable [Zone's] annual CONE value by the number of days in Seasons which the [Zone was]. . . in ZRC Shortage Conditions and ZRC Near-Shortage Conditions in the [] Auction[119]

In contrast, the McFarlane Testimony states that "[a]n ex-post adjustment will set reduced Auction Clearing Prices when more than one Season clears in ZRC Shortage or ZRC Near-Shortage Conditions."[120] Further, MISO's Deficiency Letter Response indicates that the provisions of section 69A.7.1.c.x are only intended to apply "in situations where more than one Season is in Shortage or Near-Shortage Condition."[121]

85. The proposed Tariff language is unclear because the use of the singular "final Auction Clearing Price for a Zone" without reference to a *Season's* Auction Clearing Price implies that each Zone only has one Auction Clearing Price, rather than four (one for each Season). Thus, it is reasonable to interpret this provision as applying only in situations where a Zone has "Seasons in ZRC Shortage Conditions" *or* "Seasons in ZRC-Near-Shortage Conditions," and not, as Midwest TDUs explain, situations where a Zone has one Season in ZRC Shortage Conditions and a second Season in ZRC Near-Shortage Conditions. Therefore, we direct MISO to, within 30 days of the date of this order, to file

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[119] *Id.,* Module E-1, § 69A.7.1.c.x (45.0.0) (proposed).

[120] McFarlane Test. at 41.

[121] MISO Deficiency Letter Response at 26.

revised tariff sheets that clarify section 69A.7.1.c.x, consistent with the McFarlane Testimony, the Deficiency Letter Response, and the MISO February 10 Answer.[122]

86. Clean Energy Coalition criticizes various aspects of MISO's LOLE modeling, including its use of weather data. We find that such concerns are beyond the scope of this filing insofar as they pertain to calculations that already occur independently of the addition of seasonality to the LOLE analysis.

87. In response to protestors' concerns regarding MISO's proposed LOLE target of 0.01 days per year for each Season, we find that MISO has demonstrated that a minimum seasonal LOLE target of 0.01 days per year is just and reasonable because without such a minimum LOLE target, the model will not produce accurate results. We find that MISO has sufficiently demonstrated that the model requires a non-zero LOLE target and that an LOLE target of 0.01 days per year allows MISO to maintain the annual LOLE target of 0.1 days per year, cumulative across all Seasons. We disagree with Clean Energy Parties' that Seasons with an LOLE less than 0.01 days per year indicates that such a Season has "no risk." In Seasons with a lower LOLE risk than other Seasons, it is reasonable for MISO to adjust the LOLE target to a value that allows its model to converge. Absent this adjustment, the accuracy of MISO's LOLE modeling could be impacted, which could have negative consequences for reliability. We also find that MISO's proposal to maintain LOLE targets for Seasons where the LOLE is greater than 0.01 days per year, without adjustment, is just and reasonable because those values are already sufficiently large for the model to solve accurately and that MISO has demonstrated that such an outcome would be consistent with an annual LOLE target of 0.1 days per year. As such, we do not agree with Alliant that the resulting Planning Reserve Margins are unnecessarily high.

88. MISO has demonstrated that its proposal will result in lower Reserve Requirements for non-Summer Seasons, at the MISO-wide level, which should in and of itself reduce costs to customers.[123] Although it may be the case that some LSEs may experience higher non-Summer Reserve Requirements as compared to their Summer Reserve Requirements, we do not find that to be an unjust and unreasonable result, so long as MISO's methodology to determine seasonal Reserve Requirements provides a reasonable assessment of seasonal risk, including the availability of imports and historical resource availability. MISO has demonstrated that its methodology does so. For example, MISO explains that the expected reduction in Zone 10's Local Clearing Requirement surplus in the Winter Season is primarily driven by a significant reduction in its Winter Capacity Import Limit value.

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[122] *See* MISO February 10 Answer at 43-44.

[123] MISO Deficiency Letter Response at 22.

89. To the extent that the Mississippi Commission's statement regarding MISO's "proposed CONE penalty" is referring to the Capacity Deficiency Charge, we note that MISO's revised Tariff states that the annual Capacity Deficiency Charge will be "the CONE value for the [Zone] . . . multiplied by 2.748 times the [Reserve Requirement] volume indicated by the LSE for the Planning Year."[124] We find that MISO's proposed Tariff revisions are unclear with regard to the seasonality of the Capacity Deficiency Charge and could be interpreted as being applied separately to each Season that an LSE is deficient ZRCs. Under such an interpretation, a Planning Resource that was deficient 10 ZRCs in all four Seasons would be assessed a charge of CONE multiplied by 2.748 times 40 ZRCs, whereas under the current annual construct, an LSE that is 10 ZRC deficient for the Planning Year would be assessed a charge of CONE multiplied by 2.748 times 10 ZRCs. Because MISO's proposed Tariff revisions are unclear on how the Capacity Deficiency Charge will be assessed to each Season, we direct MISO to, within 30 days of the date of this order, file revised tariff sheets that clarify the seasonality of the Capacity Deficiency Charge.

90. In response to protestors' concerns regarding MISO's proposal to implement the new construct for the next Planning Year, we note that the instant filing was made 16 months in advance of the 2023/24 Auction, after several years of stakeholder discussion. We disagree that LSEs will not have sufficient time to enhance their capacity positions, as LSEs have several options beyond "generation or transmission investments" to meet their Reserve Requirements, including bilateral contracting and Auction participation. Finally, we note that Zone 10 (Mississippi) and the MISO South subregion overall are expected to have a capacity surplus overall, suggesting that LSEs in MISO South will be able to purchase capacity to meet their Reserve Requirements for the Winter Season.[125]

2. Accreditation

a. MISO Filing

91. MISO proposes to implement a SAC proposal, which is an availability-based accreditation methodology for a newly defined set of resources called Schedule 53 Resources. MISO states that Schedule 53 Resources are Capacity Resources that are Demand Response Resources or Generation Resources, but not Dispatchable Intermittent

[124] MISO, FERC Electric Tariff, Module E-1, § 69A.10 (32.0.0) (proposed).

[125] *See* MISO February 10 Answer at 42 ("Although varying levels of reduction in [Zone] 10 resource accredited values is projected for each season, the projected Zone 10 seasonal zonal positions remain to be a surplus not a shortage."). *See* also RASC presentation at 8 (Nov. 3, 2021), https://cdn.misoenergy.org/20211103%20RASC%20Item%2004a%20Resource%20Adequacy%20Reforms%20Presentation%20(RASC010,%20011,%20012)600791.pdf.

Resources, Intermittent Generation, Electric Storage Resources, External Resources, or Use Limited Resources. MISO explains that resource accreditation for Schedule 53 Resources will no longer be based on installed capacity adjusted for forced outage rates from the Generation Availability Data System (GADS) but instead will primarily be based on the average capacity available in times of highest need given resource offers in MISO's Day-Ahead and Real-Time markets, i.e., RA Hours. MISO states that it proposes a tiered weighting structure to determine individual accreditation for Schedule 53 Resources by Season based on each Resource's Real-Time offered availability during Tier 1 hours, defined as all hours other than RA Hours; and Tier 2 hours, defined as RA Hours.

92. MISO proposes to define RA Hours for each Season as a 65-hour target that include all hours with declared MaxGen Events and the remaining hours with the tightest operating margin, subject to a maximum operating margin threshold of 25%.[126] MISO would determine RA Hours separately for MISO North and MISO South. MISO explains that the 65-hour target represents the tightest 3% of hours in a Season. MISO states that the number of RA Hours in a Season can exceed the target when declared MaxGen Events during that Season have a cumulative duration of greater than 65 hours. MISO explains that the number of RA Hours in a Season can be less than the 65-hour target because of the 25% maximum operating margin threshold, which will ultimately lead to a deficiency equal to the difference between the target RA Hours and the actual number of RA Hours.[127]

93. MISO proposes to accredit the capacity of a Schedule 53 Resource based on its Intermediate Seasonal Accredited Capacity (ISAC) determined based on its Real-Time offered availability (capped at the resource's GVTC value) during seasonal RA Hours and Non-RA Hours. MISO recognizes that the number of Tier 2 RA Hours may vary during individual Seasons when the 25% maximum margin threshold is applied or individual resources receive outage exemptions, impacting sample sizes of RA Hours and corresponding ISAC accreditation calculations. Therefore, MISO proposes that, if the number of Tier 2 RA Hours for a Season or a specific resource fall below the 3% target of 65 hours, a resource's Annual Average Offered Capacity (AAOC) will be used to

[126] MISO proposes to include offline resources with a 12-hour-or-less lead time in the operating margin calculations, arguing that a 12-hour-or-less lead time better reflects actual operating margins MISO sees in real-time operations, which may be impacted by uncertainty that occurs after the deadline to commit longer lead resources has passed. MISO adds that a 12-hour-or-less lead time leads to more RA Hours being identified in each Season, allowing resource accreditation to be based on availability during a specific Season, with less need to fill in deficient RA Hours. McFarlane Test. at 23-24.

[127] Transmittal at 16.

supplement the deficient number of hours as part of the Tier 2 portion of the accreditation calculation.[128] MISO states that Seasonal Tier 1 Non-RA Hours, in contrast, include all hours in a Season of a Planning Year, excluding Tier 2 RA Hours and any hours where a resource had an exemption or was not designated for Resource Adequacy Requirements.[129]

94. MISO states that the final ISAC value will be the weighted average over its values from the two tiers. MISO explains that it proposes an 80% Tier 2 and 20% Tier 1 weighting, arguing that assigning the heavier weighting to Tier 2 tight conditions ensures the alignment between a resource's SAC value and its availability and performance during times of highest risk and greatest need. MISO proposes a three-year transition period, such that Tier 2 weighting would start at 60% for Planning Year 2023/2024, rise to 70% in Planning Year 2024/2025, and reach the full 80% in Planning Year 2025/2026.[130]

95. To convert a Schedule 53 Resource's ISAC to its final SAC value, MISO proposes to apply a system-wide UCAP/ISAC ratio, which is the sum of MISO's fleet-wide UCAP accreditation of Schedule 53 Resources divided by the sum of MISO's fleet-wide ISAC accreditation of Schedule 53 Resources. MISO states that the UCAP/ISAC ratio is proposed to avoid undesirable impacts to Auction requirements and non-Schedule 53 resources.[131]

96. MISO explains that, while MISO intends to address potential accreditation enhancements to non-Schedule 53 Resources in a future filing after development and stakeholder discussions, non-Schedule 53 Resources will receive SAC values based on a resource type consistent with their current accreditation rules, adjusted for seasonality. MISO states that wind resources will receive accreditation for each Season based on seasonal ELCC studies with capacity accreditation allocated based on eight peak hours for each Season. MISO further states that non-wind intermittent resources such as run-

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[128] A resource's AAOC is determined by calculating a resource's average offered availability during Annual RA Hours for each 12-month period within the three most recent periods beginning September 1st and ending August 31st. Annual RA Hours for each year are a 260-hour target that include all hours with declared MaxGen Events and the remaining hours with the tightest operating margin, subject to a maximum operating margin threshold of 25%. *See* MISO, FERC Electric Tariff, Module E-1 § Schedule 53 III.B (32.0.0) (proposed)).

[129] Transmittal at 17.

[130] *Id.*

[131] *Id.*

of-river hydro, solar, intermittent BTMG, and biomass SAC will be based on historical output during hours ending 15:00, 16:00, and 17:00 Eastern Standard Time (EST) for the relevant Spring, Summer, and Fall Seasons, and that Winter accreditation will be based on historical output in hours ending 8:00, 9:00, 19:00, and 20:00 EST in the Winter Season. MISO asserts that Load Modifying Resources (LMRs), which include both Demand Resources registered as LMRs (LMR DR) and BTMG registered as LMRs, will be accredited based on lead time and number of calls per year consistent with current LMR rules, with adjustments to establish a minimum number of calls for each Season—five for each Summer and Winter, and three for each Spring and Fall.[132]

97. MISO also argues that the SAC proposal will incent better coordination of Generator Planned Outages by limiting—through exemptions—the extent to which planned outages impact a resource's SAC, provided certain conditions are met.[133] MISO explains that its current resource adequacy construct provides for exemptions for generator planned outages if certain criteria are met. MISO states it worked collaboratively with stakeholders to develop the proposed exemption process that integrates with the SAC accreditation process in Schedule 53 to provide for three levels of exemptions: (1) full exemption for Generator Planned Outages from Tier 1 and Tier 2 SAC calculations; (2) exemption from Tier 1 SAC calculations only; and (3) no exemption. MISO states that Tier 1 and Tier 2 exemptions will be provided if: (1) the generator owner or operator schedules its first planned outage 120 days or more in advance of the outage date and 120 days or more beyond the end date of any previously scheduled outages for the unit, and the Maintenance Margin[134] for the time period of the outage is equal to or greater than 0; or (2) the generator owner or operator reschedules its planned outage at MISO's request. MISO further states that Tier 1 only exemptions will be provided if the following conditions are met: (1) the generator owner or operator schedules its first generator planned outages 120 days or more in advance of the outage start date and 120 days or more beyond the end date of any previously scheduled outages for the unit, and the Maintenance Margin is less than 0 for the time period of the outage; (2) a subsequent generator unit outage requests 120 days or more in advance and/or generator owner or operator's planned outage is less than 120 days in advance but at least 31 days in advance of the outage start date; (3) the planned outage is less than 31 days in advance but at least 14 days in advance of the outage start date and passes the No Harm

[132] *Id.* at 18.

[133] *Id.* at 15-16.

[134] Maintenance Margin is the maximum MW of additional generation that can be taken out of service for planned maintenance for a given time-period without undue risk to supply adequacy for MISO's Balancing Authority Area, including MISO sub-regions. Transmittal at 20.

Test;[135] or (4) the generator owner or operator reschedules its planned outage at MISO's request.[136] MISO explains that, for planned outages submitted before MISO's proposal goes into effect, outages that are scheduled to start prior September 1, 2022 will be treated as fully exempt for Tier 1 and 2.

b. Comments and Protests

98. OMS states that the seasonal component of this proposal will allow resources to take extended seasonal outages for both maintenance and economic reasons, and it will relieve those resources from any must-offer requirement, allowing for better maintenance and economic decisions.[137] The Indiana Commission considers MISO's SAC proposal a just and reasonable approach to determining what can be reasonably expected of a resource and reflecting that expectation in that resource's accreditation.[138] The Indiana Commission states that accrediting resources based on their Real-Time offered availability during tight system hours is both prudent and equitable. The Indiana Commission contends that a resource's accreditation should reflect "a realistic expectation of its performance, and resources should be rewarded for delivering when they are most needed."[139] The Indiana Commission submits that MISO's proposal achieves this standard.

99. Potomac Economics supports MISO's SAC proposal, stating that resources whose availability or capability varies significantly by Season would receive revenues that reflect those seasonal differences. Potomac Economics argues that relatively high-cost resources would have an opportunity to achieve savings by taking seasonal outages during shoulder Seasons.[140] Potomac Economics states that the MISO accreditation proposal will provide substantial benefits over the current construct where generating

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[135] MISO proposes that the No Harm Test includes, but is not limited to, "outage approval, compliance with all applicable operation guides, review of possible conflicting outages or system conditions, and system capacity (Maintenance Margin, Multiday Operational Margin, 30-day margin)." It also includes the criteria outlined in the Generator Outage BPM. *See* MISO, FERC Electric Tariff, Schedule 53 § II.C (32.0.0) (proposed).

[136] Transmittal at 20-21.

[137] OMS Comments at 4-5.

[138] Indiana Commission Comments at 6-7.

[139] *Id.* at 7.

[140] Potomac Economics Comments at 3.

resources are accredited to sell capacity based on their self-reported forced outage performance, which is used to calculate their UCAP levels. Potomac Economics, though generally supportive of the filing, argues the accreditation portion of MISO's proposal is suboptimal for a number of reasons: (1) other types of outages and derates reduce MISO's access to Capacity Resources; (2) resources do not completely report their outages and derates; (3) less reliable resources that are rarely needed are credited as fully available when not asked to run, inflating their UCAP levels; and (4) long-lead time resources that are frequently offline provide far less capacity value than their UCAP value because, when tight conditions arise unexpectedly, they cannot be used.[141]

100. Potomac Economics states that the application of MISO's proposed UCAP/ISAC ratio is an important dimension of MISO's accreditation proposal because it maintains the relative supply and demand balance in the Auction. Potomac Economics acknowledges that, although MISO's proposed availability-based accreditation will generally be lower than the UCAP accreditation, the application of the UCAP/ISAC ratio is reasonable because it recognizes that each MW of ISAC provides more reliability than each MW of UCAP; therefore, less-available resources will receive less capacity accreditation while more-available resources will receive higher accreditation amounts. Potomac Economics contends that, by shifting capacity accreditation from less-available resources to more-available resources, the capacity market procurements will be better aligned with the reliability value provided by MISO's resources.[142]

101. Potomac Economics highlights some aspects of the proposed SAC methodology that are not consistent with its recommendations. First, Potomac Economics notes that an important aspect of MISO's proposal is how to calculate the operating margin MISO uses to determine whether an hour should be classified as an RA Hour or a non-RA Hour. Potomac Economic states that MISO's proposal includes resources with a lead time of 12 hours or less to calculate this operating margin. Potomac Economics suggests that, by including such resources in the operating margin calculation, MISO may calculate an artificially high margin and not designate an hour as an RA Hour even though the hour is among the tightest of the year. Therefore, Potomac Economics recommends that MISO only include resources with a lead time of less than 6 hours, which is the timeframe in which MISO often recognizes that emergency conditions are developing.[143]

102. Second, Potomac Economics states that it prefers a sliding scale to reduce an offline resource's deemed availability as its offered lead time increases, ranging from 100% at 2 hours to 0% at 12 hours. Potomac Economics contends that it is rare for any

[141] *Id.* at 6.

[142] *Id.* at 7.

[143] *Id.* at 8-9.

offline resource with lead times longer than 12 hours to provide any reliability contribution when reliability events occur. Potomac Economics contends that MISO's proposal to treat offline resources with lead times less than 24 hours as available up to their offered output intentionally overvalues less flexible, long-lead time units.[144] Potomac Economics suggests that, regardless of whether a resource could have reasonably been committed in MISO's day-ahead process, if most of the threats to reliability emerge during the operating day, only offline resources that can start once the threat is recognized can contribute to reliability. Potomac Economics adds that offline resources that theoretically could have been committed the prior day, but whose lead time is too long for them to start to mitigate the reliability threat provide no value in such events.[145]

103. Third, Potomac Economics argues that the 80%/20% weighting on availability in Tier 1 and Tier 2 hours MISO proposes for accreditation is not ideal because, according to Potomac Economics, resources provide very little marginal reliability value in non-RA Hours as virtually all resource marginal reliability value is captured in RA Hours. Potomac Economics suggests that the tiered approach is inferior to a simpler accreditation approach that would be based entirely on tight-margin RA Hours. Potomac Economic notes, however, that it does not deem MISO's approach to be a major shortcoming and certainly not a basis to find the proposal unreasonable.[146]

104. Finally, Potomac Economics contends that MISO's proposed outage exemptions are inconsistent with the principles underlying the availability-based accreditation. Potomac Economics states that resources that schedule more frequent or longer-duration outages are less likely to be available during reliability events, and, because reliability events are increasingly likely to occur when they are not expected, there is no reason to grant exemptions from the availability-based accreditation. Potomac Economics states that maintenance margins are deterministically calculated based on expected conditions at the time that the outages, therefore the proposed maintenance margin criteria ignore unexpected factors and conditions that may arise that trigger reliability events. Potomac Economics submits that since resources that take frequent or long-duration planned outages are less available to respond to these types of reliability events, planned outages should not exempted from the availability-based accreditation, and including such exemptions reduces the benefits of MISO's proposal.[147]

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[144] *Id.* at 9-10.

[145] *Id.* at 10.

[146] *Id.* at 11.

[147] *Id.* at 11-12.

105. The Michigan Commission argues that, while it has concerns about the ability to develop new resources in the MISO North region under the new seasonal construct in time to meet MISO's proposed implementation date of the proposals, set for the 2023/2024 Planning Year, these are issues that can be addressed by MISO to make any adjustments necessary in order to allow resources to be available by the proposed implementation date. In particular, the Michigan Commission notes that MISO filed its proposed Tariff revisions for reducing the generator interconnection queue from 505 to 365 days with the Commission in Docket No. ER22-661-000.[148] The Michigan Commission believes that ensuring that MISO meets this generator interconnection queue target will be critically important in meeting MISO's implementation timeline for MISO's instant proposal, particularly given the fact that the MISO generator interconnection queue currently has been experiencing more delays in the East Region due to PJM's Affected System Studies. The Michigan Commission states that, if MISO and its reliance on affected system studies from its neighbors cannot keep the interconnection queue to its proposed 365-day timeline to bring on necessary generation to meet the new Tariff requirements, then MISO may need to file to delay implementation by a year.[149]

106. ITC contends that the SAC provisions will ensure that committed generation capacity is accurately assessed for its ability to meet the needs of the MISO system at all times, and that generators have the incentive to ensure the delivery of all energy for which they are committed.[150]

107. Several protestors argue that MISO has not fully supported its proposed SAC methodology. DTE Electric contends that MISO has not demonstrated that its accreditation proposal will lead to an increase in the availability or mix of resources.[151] COMPP argues that SAC is unproven and, much like UCAP accreditation, inflates capacity by maintaining too many exemptions.[152] Clean Energy Coalition argues that the calculation process for Schedule 53 resources is data-intensive, time consuming, and susceptible to errors, and it is difficult to obtain intuition around how a change in the

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[148] Michigan Commission Comments at 3. On March 14, 2022, the Commission accepted MISO's propose revisions to its Generator Interconnection Procedures (GIP). *See Midcontinent Indep. Sys. Operator, Inc.*, 178 FERC ¶ 61,141 (2022).

[149] Michigan Commission Comments at 3-4.

[150] ITC Comments at 3.

[151] DTE Electric Protest at 13.

[152] COMPP Protest at 13.

inputs will affect outputs.[153] While Ameren agrees with MISO that MISO's accreditation requirements need to be updated and strengthened, Ameren argues that the SAC proposal has not been shown to be just and reasonable.[154] The Mississippi Commission states that the SAC proposal is untested, has never been adequately modeled, offers no assurance that it will effect the intended changes, has not been linked to an actual problem, and has not been used by any other Regional Transmission Organization (RTO) or Independent System Operator (ISO).[155] The Mississippi Commission argues that the SAC proposal attempts to create a price signal to promote investment in certain types of generation, instead of focusing on better outage coordination to ensure generation is available to serve load.[156] The Mississippi Commission notes that, according to MISO's first proposed tranche of MISO's Long-Range Transmission Planning projects, the areas in immediate need of reliability upgrades are Minnesota and Iowa, which coincidently have extensive renewable generation penetration. The Mississippi Commission states that MISO has no plans to evaluate whether Long-Range Transmission Planning projects are needed in MISO South for two years, a strong indication that MISO South is not facing the same reliability concerns as the rest of MISO.[157]

108. East Texas argues that MISO's proposed accreditation process creates an unnecessary, unwarranted, and in many cases, unfair burden on generation owners. East Texas suggests that MISO's justifications for the proposed accreditation methodology are blanket assertions not tied to any basis for immediate change.[158] East Texas submits that MISO has not provided a more thorough analysis of MISO's accreditation proposal that would allow East Texas and other parties to develop a thorough understanding of what these new standards will mean to their operations. East Texas contends that, if the parties who know their resources the best are unable to ascertain the impacts of this complicated accreditation process, it is unreasonable for the Commission to assume that MISO has a full grasp of the potential consequences.[159]

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[153] Clean Energy Coalition Protest at 17.

[154] Ameren Protest at 4.

[155] The Mississippi Commission Protest at 2, 5.

[156] *Id*. at 36.

[157] *Id.* at 6-7.

[158] East Texas Protest at 7.

[159] *Id.*

109. Some protestors contend that the SAC methodology will be unable to predict future availability during times of highest need. Minnesota Power states that the proposal has no defined means to improve on MISO's objective of "converting the capacity procured in the [Auction] to energy when and where they are most needed," given that the SAC values are not reflected into any parameters used in the MISO Security Constrained Economic Dispatch.[160] Clean Energy Coalition argues that the methodology may not provide the intended incentive to utilities and market participants to improve performance of their generators.[161] DTE Electric argues that past performance in tight hours can provide little prediction of future performance.[162] East Texas states that MISO has not explained how concentrating on limited operational time periods would accurately portray the likelihood of a generating unit's availability in a future Season.[163]

110. Entergy Coalition asserts that MISO has not demonstrated that its SAC proposal aligns with MISO's Resource Availability and Need (RAN) initiative goal to close the gap between planning and operational outcomes.[164] Entergy Coalition emphasizes that MISO's SAC proposal is not a good predictor of a resource's future availability and moreover is subject to a high degree of randomness. Entergy Coalition contends that, as a consequence of this randomness, if LSEs base their supply planning decisions on data and information communicated via their SAC accreditation values, many of those decisions will be sub-optimal and will not help achieve MISO's desired operational goals.[165] Entergy Coalition argues that such uncertainty arising from MISO's proposal unnecessarily and unhelpfully complicates the already complex task of assessing the expected future accreditation for a given resource.[166]

111. Alliant is concerned that MISO's proposal is overly aggressive and can have unintended, long-term impacts that could thwart MISO's best intentions. Alliant requests that the Commission require MISO to further engage stakeholders before implementing the changes in the proposal and to postpone the implementation date by at least one

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[160] Minnesota Power Comments at 1 (quoting Transmittal at 1).

[161] Clean Energy Coalition Protest at 17-18.

[162] DTE Electric Protest at 14.

[163] East Texas Protest at 8.

[164] Entergy Coalition Protest at 10 (citing McFarlane Test. at 24).

[165] *Id.* at 11.

[166] *Id.*

year.[167] Entergy Coalition argues that MISO's proposed implementation period is inappropriate for such a significant change in market design. Entergy Coalition notes that the Commission has accepted transition periods both for the establishment of new capacity markets and for significant changes in capacity markets, such as the Settlement Agreement that established PJM's capacity market, where the Commission accepted a four-year transition period for locational pricing.[168] Entergy Coalition further notes that the Commission accepted a five-year transition period for PJM's proposed Capacity Performance Resource,[169] as well as required PJM to apply its new rules to Fixed Resource Requirement[170] entities only after the conclusion of the Fixed Resource Requirement plans to which those entities were currently obligated as of the date of the order.[171] WEC Utilities state that MISO's proposed implementation leaves insufficient time for utilities to adjust preexisting business operations and decision processes, specifically insufficient time for LSEs to modify their resource planning or operational strategies to account for seasonal accreditation requirements and performance-based capacity accreditation. WEC Utilities explain that planned outages, which will directly affect seasonal availability, are often scheduled years in advance. WEC Utilities add that some resource owners will likely need to adjust their fuel supply provisions or to improve winterization to ensure availability and accreditation within the new seasonal construct. WEC Utilities argue that MISO's proposal provides "deceptively" little time for market participants to adjust commercial and operation plans to reflect the proposed seasonal requirements.[172] East Texas and Entergy Coalition add that using historic data for the 2023/2024 Planning Year means that resource owners will have little opportunity to take actions to improve their accreditation.[173]

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[167] Alliant Protest at 1.

[168] Entergy Coalition Protest at 20-21 (citing *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331, at P 68 (2006) (PJM Reliability Pricing Model Order)).

[169] *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208, at P 253 (2015) (PJM Capacity Performance Resource Order).

[170] Entergy Coalition states that PJM's Fixed Resource Requirement option is a self-supply option for LSEs to avoid the capacity market auction in PJM. Entergy Coalition Protest at 21.

[171] PJM Capacity Performance Resource Order, 151 FERC ¶ 61,208 at P 218.

[172] WEC Utilities Comments at 4-5.

[173] East Texas Protest 8-9; Entergy Coalition Protest at 22.

112. Some protestors argue that it is inappropriate to accredit resources based on their prior availability under an entirely different capacity accreditation construct. Consumers Energy and MISO TOs argue that the proposed transition framework may punish generators based on operational choices that were prudently made under the existing accreditation framework, because the proposed accreditation methodology will be applied to historical real-time energy offers, outages, and notification times on which those operational choices were based.[174] Consumers Energy asserts that it is inappropriate to impose a "different and controversial" accreditation framework over those choices based on the existing market construct, conditions, and accreditation framework.[175] DTE Electric objects to MISO's proposed implementation timeline, noting that it will require using historical data from before the proposal was approved to calculate accreditation and that it does not allow market participants time to adjust, especially if they will need to add capacity through the interconnection process.[176] East Texas states that, for the initial 2023/2024 Planning Year, two-thirds of the operational performance data would be based on how units operated and took outages in a completely different accreditation construct. East Texas argues that MISO's proposed use of historical data also undercuts one of its assertions for why a new accreditation methodology is needed—that the new methodology will improve incentives to improve availability. East Texas asserts that, because MISO will accredit based on operational data from the prior three years, a generator owner that makes improvements to its facility would not receive full credit for those enhancements until the third year after their completion. East Texas maintains that this delay of credit for an investment would discourage owners from improving current generating units.[177]

113. Entergy Coalition suggests that MISO's implementation plan could open accreditation values and Auction results to allegations of retroactive ratemaking because market participants were not given proper notice. Entergy Coalition states that, while it is common for various rates on file at the Commission to rely on historical information, at the time such rates were filed, ratepayers were prospectively put on notice about the use of their historical activity. In contrast, if a new or newly changed rate relies on historical information where ratepayers had no notice in the past as to how their past behavior would be used in the new rate, that is retroactive ratemaking.[178] Entergy Coalition states that MISO's implementation plan also violates the Commission's policy that changes in

[174] Consumers Energy Limited Protest at 1-2; MISO TOs Comments at 5-6.

[175] Consumers Energy Limited Protest at 6.

[176] DTE Electric Protest at 15.

[177] East Texas Protest at 9.

[178] Entergy Coalition Protest at 22-23.

rate design are appropriate only on a prospective basis. Entergy Coalition states that, at this point, it is too late for generation owners to alter previous accreditation and outage decisions they had made. Entergy Coalition argues that all aspects of MISO's proposal should be implemented on a prospective basis once the rate design is accepted by the Commission.[179]

114. On the other hand, COMPP avers that MISO's proposed three-year transition mechanism delays urgent reforms which are needed sooner. COMPP argues that under the current proposal MISO will only become aware of deficiencies in the SAC construct in Planning Year 2025/2026. COMPP adds that, if the Commission approves the SAC proposal, it should go into effect as soon as practicable.[180]

115. Some protestors express concerns about the specifics of MISO's SAC calculation. DTE Electric argues that MISO's proposal bases capacity accreditation on chance and that basing it on retroactively determined RA Hours will not improve system reliability or efficiency.[181] DTE Electric states that the MISO proposal will "handicap prudent planning" during periods of significant change in the resource mix.[182] DTE Electric argues that MISO's proposal "inappropriately" requires resource owners to predict tight system conditions in advance although MISO itself is not able to because some of these events are unpredictable and emergency scenarios are increasingly common.[183] DTE Electric states that MISO should have based resource accreditation on all hours in a Season if MISO expected generators to always be available as they are expected to be during RA Hours.[184] DTE Electric contends that basing accreditation on select RA Hours rather than on all hours in a Season decreases the impact of the proposal and will not achieve MISO's goal of increasing confidence that capacity is available when needed.[185] Similarly, the Mississippi Commission asserts that an 80%/20% weighting is biased towards periods with emergencies in tight hours because it over-values those hours when infrequent emergencies are forecasted to occur and when the system is tight, and ignores

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[179] *Id.* at 23 (citing *Arkla Energy Res.*, 48 FERC ¶ 61,305, at 61,980 (1989); *Nat'l Fuel Gas Supply Corp.*, 140 FERC ¶ 61,114 (2012)).

[180] COMPP Protest at 16-17.

[181] DTE Electric Protest at 2.

[182] *Id.*

[183] *Id.* at 6.

[184] *Id.* at 7.

[185] *Id.*

the majority of hours when reliable resources ensure resource adequacy.[186] The Louisiana Commission and Ameren argue that the 80% weighting factor on RA hours (Tier 1) can be especially punitive to an otherwise reliable and well-performing generator that was unavailable during the often-times randomly occurring RA Hours.[187]

116. Other protestors dispute that RA Hours accurately capture the hours of highest risk. Midwest TDUs argue that MISO has not demonstrated that hours with reserve margins as high as 25% are truly tight and warrant the same heavy weighting as MaxGen hours. Midwest TDUs dispute MISO's suggestion that the 25% threshold "provides a reasonable balance between having an adequate number of RA Hours for each Season and selecting the set of RA Hours that are truly tight," suggesting that MISO's reasoning does not explain why MISO does not base accreditation on hours that are truly tight or represent true emergency conditions.[188] Clean Energy Coalition argues that MISO's attempt to separate high-risk hours from other hours is flawed because it arbitrarily uses a fixed 65 hours per Season and is not consistent with MISO's assertion that risk periods are changing with the adoption of more renewable resources. Clean Energy Coalition further argues that this may artificially create perceived times of risk when there is no risk and may result in periods that are overlooked if there are more than 65 hours of high risk in a Season.[189]

117. Midwest TDUs add that resources do not have the same advanced notice about RA Hours that are not MaxGen hours, as it is impossible to determine whether a particular hour is one with the lowest operating margins in a Season until the end of the Season.[190]

118. Clean Energy Coalition is concerned that the times of tight reserve margins, as defined by MISO, may or may not be the same as those with high Loss of Load Probability (LOLP) risk. Clean Energy Coalition argues that MISO's approach of allowing resources with a 12-hour lead time to count as available for purposes of determining the system's reserve margin fails to consider how unexpectedly tight hours typically arise in the range of 2-8 hours.[191]

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[186] Mississippi Commission Protest at 8.

[187] Ameren Comments at 5; Louisiana Commission Protest at 6.

[188] Midwest TDUs Protest at 7-8 (citing McFarlane Test. at 25).

[189] Clean Energy Coalition Protest at 10.

[190] Midwest TDUs Protest at 8.

[191] Clean Energy Coalition Protest at 11.

119. Several protestors contend that MISO's proposal to use AAOC to supplement deficit RA Hours in a particular Season highlights several flaws in MISO's proposal.[192] Midwest TDUs argue that MISO has not demonstrated that there is any connection between capacity needs in a given Season and a resource's availability during hours in other Seasons, or hours within MISO's 25% operating reserve margin threshold; therefore, it is unjust and unreasonable for MISO to include those hours as part of the 80% weighting in calculating SAC when those hours do not represent the "periods of highest risk and greatest need" during each Season.[193] Midwest TDUs state that this approach means that an in-Season RA Hour could be double-counted, both as part of a resource's Seasonal RA Hours and as part of its AAOC used to backfill Tier 2. Midwest TDUs contend that this use of AAOC means that a resource's accreditation value for a specific Season is based at least in part—and sometimes primarily—on its performance in other Seasons.[194] Clean Energy Coalition argues that AAOC use creates an artificial profile for these resources and assumes risk in a Season when there is none.[195] Similarly, DTE Electric, MISO TOs, and Minnesota Power argue that using AAOC when fewer than 65 RA Hours are available for a Season undermines the seasonality of the construct and does not accurately represent a unit's performance during a specific Season.[196] WEC argues that poor performance in one Season is not necessarily indicative of poor performance in another Season that contains fewer than 65 RA Hours. WEC Utilities suggests backfilling RA Hour deficiencies with the seasonal UCAP of a resource would be more indicative of each resource's seasonal availability.[197]

120. Midwest TDUs state that the use of AAOC to determine Tier 2 accreditation will not be an infrequent or insignificant part of the Tier 2 calculation. Midwest TDUs contend that MISO's Conceptual Design document for the proposal shows that, in MISO North, each of the past three Planning Years had at least one Season with fewer than 65 Seasonal RA Hours, and that, in some cases, a resource's RA Hours for a Season could be determined primarily based on out-of-Season hours. As an example, Midwest TDUs

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[192] Midwest TDUs Protest at 7-14; Clean Energy Coalition Protest at 10; DTE Electric Comments at 14; MISO TOs Comments at 9-10; Minnesota Power Protest at 2; WEC Utilities Comments at 10-12; East Texas Protest at 8.

[193] Midwest TDUs Protest at 14 (citing Transmittal at 16).

[194] *Id.* at 9.

[195] Clean Energy Coalition Protest at 10.

[196] DTE Electric Protest at 14; MISO TOs Comments at 9; Minnesota Power Comments at 2.

[197] WEC Utilities Comments at 10-12.

explain that the Conceptual Design document shows that the Winter of the 2019/2020 Planning Year had just one RA Hour, meaning that over 98% of the Tier 2 hours for that Season would be backfilled based on AAOC during Annual RA Hours. Midwest TDUs argue that, despite MISO's claim that its "proposed reforms measure and mitigate non-Summer reliability risk," MISO's proposal could accredit non-Summer Seasons based primarily on Summer performance, as most Annual RA Hours occur in the Summer.[198] Midwest TDUs argue that this fails to implement MISO's stated goal of "transition[ing] from the current Summer-based, annual construct to four distinct seasons."[199] Midwest TDUs further contend that, if a resource is unavailable during a Winter RA Hour because of extreme cold weather, there is no reason that hour should factor into its accreditation for Seasons that do not have extreme cold weather conditions. Midwest TDUs therefore argue that MISO's proposal to use AAOC to determine SAC fails to ensure seasonal accreditations that reasonably reflect availability in a particular Season.[200] Midwest TDUs contend that, rather than using a resource's availability during RA Hours in other Seasons to backfill RA Hours in one particular Season, it would be more appropriate to fill in deficient RA Hours based on average availability in all hours of that Season. Midwest TDUs argue that, in Seasons with very few MaxGen hours, average availability throughout the rest of that Season is a reasonable approximation of a resource's availability to meet capacity needs in that Season.[201]

121. Midwest TDUs suggest that MISO is inconsistent in describing how MISO will replace Seasonal RA Hours that are exempt from a resource's Tier 2 calculation. Midwest TDUs note that MISO's testimony states that MISO will identify RA Hours, then remove any hours where a resource received a Tier 2 Planned Outage exemption, and finally backfill any deficiency to reach the 65-hour target. Midwest TDUs argue that this implies that MISO will not attempt to identify additional hours with operating margins under the 25% threshold to reach the 65-hour Seasonal RA Hour target after it removes exempt hours, but instead backfill those exempt hours based on Annual RA Hours. Midwest TDUs submit that, in contrast, the proposed Tariff language excludes Planned Outage exemptions from the initial identification of Seasonal RA Hours, meaning that exempt hours are removed *before* MISO attempts to identify sufficient Seasonal RA Hours to reach the 65-hour target. Midwest TDUs state that, under this approach, MISO would first look to replace exempt hours with other non-MaxGen hours within the 25% operating margin threshold before backfilling based on Annual RA

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[198] Midwest TDUs at 9-10 (citing Smith Test. at 19).

[199] *Id.* at 10 (citing Transmittal at 4).

[200] *Id.* at 10-11.

[201] *Id.* at 13-14.

Hours, reducing the extent to which MISO would rely on problematic Annual RA Hours. Midwest TDUs submit that MISO should be required to clarify the inconsistency in its testimony and proposed Tariff language.[202]

122. Some entities argue that MISO's SAC methodology will create an unacceptable level of annual accreditation volatility. DTE Electric states that the current year-to-year accreditation volatility for its capacity resources is 0.8% and that MISO's own analysis indicates that under MISO's proposal, half of market participants will see volatility around 3% and a quarter will see volatility of 6%-12%.[203] DTE Electric argues that the increase in accreditation volatility will send a signal for market participants to overbuild, which will be an additional expense for consumers and is counter to the reserve-sharing purpose foundational to MISO.[204] Entergy Coalition contends that increased volatility is due, in large part, to MISO's placing an 80% weight on historic unit performance during a small subset of tight margin hours, which means randomness—rather than past or expected future unit performance—becomes a primary factor in determining a resource's seasonal accreditation year. Entergy Coalition claims that this, on its face, is unreasonable.[205]

123. Entergy Coalition explains that, if a generally high performing generator is unavailable for one or two days where RA Hours occur, then that resource will see a significant *reduction* in accredited capacity as the outage event is included in the three-year look back period, followed by a significant *increase* in accredited capacity as the forced outage event is excluded from (or rolls off of) the three-year look back period. Entergy Coalition contends that including planned maintenance outages in determining unit accreditation will also lead to higher levels of accreditation volatility.[206]

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[202] *Id.* at 11-12 (citing McFarlane Test. at 26-27).

[203] DTE Electric Protest at 8, 12 (citing RASC presentation, at 6 (Sep. 1, 2021), https://cdn.misoenergy.org/20210901%20RASC%20Item%2003%20RAN%20Resource%20Adequacy%20Contruct%20Presentation%20(RASC%20010,%20011,%20012)584259.pdf).

[204] *Id.* at 8-9.

[205] Entergy Coalition Protest at 4 (citing RASC presentation, at 6 (Sep. 1, 2021), https://cdn.misoenergy.org/20210901%20RASC%20Item%2003%20RAN%20Resource%20Adequacy%20Contruct%20Presentation%20(RASC%20010,%20011,%20012)584259.pdf).

[206] *Id.* at 5.

124. Entergy Coalition notes that MISO's analysis provided in the stakeholder process produced standard deviations of SAC values and found that 25% of market participants will experience a standard deviation between 7.6% and 15.5% from one Planning Year to the next. Entergy Coalition states that its calculations show that a 15.5% standard deviation corresponds with a 20% chance that a market participant's total accredited capacity will undergo a year-to-year change of 20%. Entergy Coalition contends that large year-to-year swings in any availability-based accreditation proposal are evidence that the proposal is a poor predictor of future unit availability, particularly given the small number of RA Hours. Entergy states that, as a result, it is not reasonable to believe that MISO's SAC proposal will be a good measure of a resource's anticipated capability and availability during times of need.[207]

125. Several comments raised the issue of how MISO will incorporate planned generator outages into the SAC accreditation proposal. OMS contends that MISO's proposed outage exemption framework affords generator owners the flexibility to schedule short-notice outages while incentivizing prudent outage planning done well in advance and provides grid operators greater levels of certainty. OMS states it is important to note that, from a utility operations perspective, as the operating day approaches, generator owners have the benefit of more accurate information on expected load and resource conditions to manage the risk associated with taking a short-lead time outage. OMS contends that it would be counterproductive to exempt resources from potential accreditation impacts if system conditions are expected to be tight. OMS argues that this proposal reduces the risk that resources will experience unfair accreditation impacts because resources can schedule outages as short as 14 days out if system conditions are favorable and the outage passes a no-harm test.[208] OMS contends that MISO's current outage classification framework fails to recognize many types of outages and assumes minimal planning outages during different seasonal peak periods, which does not align with observed history. OMS notes that this lack of accounting of correlated outages and past performance history is precisely why the North American Electric Reliability Corporation (NERC) has pointed out the shortcomings of the traditional Reserve Requirements approach.[209] Duke Energy supports MISO's proposed

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[207] *Id.* at 6-7.

[208] OMS Comments at 6-7.

[209] *Id.* at 7 (citing NERC, 2020 Long Term Reliability Assessment at 6 (Dec. 2020), https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2020.pdf)

exemption process for full generator planned outages because it appropriately reduces the denominator to accurately reflect the capability of a generator.[210]

126. Consumers Energy agrees that increasing the impact of forced outages during tight hours on resource accreditation will create incentives for generators to appropriately invest in maintenance and supply; but argues that reducing the flexibility to prudently schedule planned outages is arbitrary and does not address MISO's identified issues.[211] Consumers Energy asserts that it is more important for market participants to have flexibility to schedule and plan outages when baseload generation is becoming less common and more consolidated.

127. Consumers Energy states that, if MISO's Maintenance Margin is increasingly insufficient, then MISO should reconsider how it determines the Maintenance Margin or increase how forced outages impact accreditation, as opposed to punishing generators that appropriately coordinate and schedule outages.[212] Consumers Energy asserts that MISO does not explain how modifying the exemption rules for prudently planned outages will improve operating or Maintenance Margins.[213] Consumers Energy also states that eliminating the ability for generators to schedule planned outages less than 120 days in advance without risking accreditation does not address the correlation between forced outages and insufficient investments in winterization or fuel supply.[214] Regarding the shift in resource types, Consumers Energy asserts that MISO also does not tie that concern to the timing of scheduling planned outages, and argues that the proposal will not improve the "confidence in the availability of remaining resources."[215] Furthermore, Consumers Energy argues that MISO's explanation that coordinating outages well in advance will provide more visibility into the resources available under tight conditions does not sufficiently explain how its proposal will improve reliability.[216]

128. Entergy Coalition disputes MISO's statements that resource owners currently have little to no incentive to minimize the length of planned outages. Entergy Coalition argues

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[210] Duke Energy Comments at 4.

[211] Consumers Energy Limited Protest at 7.

[212] *Id.* at 8-9.

[213] *Id.* at 8.

[214] *Id.* at 8-9 (citing Smith Test. at 18).

[215] *Id.* at 9 (citing Wright Test. at 23).

[216] *Id.* at 9-10 (citing Smith Test. at 20).

that resource owners have obvious economic and system reliability incentives to minimize the length of planned outages in order to ensure high availability of their resources, as each day a resource is offline is a day that resource does not collect revenue from energy and ancillary services markets.[217]

129. Several entities protest the requirement to schedule an outage at least 120 days in advance in order to receive a Tier 2 exemption for that outage. East Texas and DTE Electric contend that MISO has not adequately explained why outages must be scheduled 120 days ahead of time to be eligible for a full exemption, nor has MISO explained how such a cutoff would increase resource availability during RA Hours. Consumers Energy argues that increasing the advance notice period required to secure a full outage exemption from 14 days to 120 days is arbitrary, unsupported, and fails to address the issues identified by MISO.[218] East Texas further argues that MISO has not described why all MISO-approved, planned outages cannot receive a full exemption when the Maintenance Margin is greater than zero.[219] Entergy Coalition and Consumers Energy are concerned that the 120-day advance notice criterion could have the perverse effect of discouraging generation owners from performing some maintenance activities, resulting in worse unit performance.[220] Consumers Energy asserts that increasing the advance notice period creates incentives for risky, suboptimal plant operation by discouraging prudent, planned outages in the short to medium term.[221] Entergy Coalition argues that MISO's Tier 2 exemption requirements are unreasonable because, as long as there is a positive Maintenance Margin at the time of submission for the entire duration of a planned outage (with at least 14 days' notice, as currently required under RAN Phase I exemption criteria), it is unreasonable to conclude that the planned outage will materially increase system risk and therefore should lower the resource's accreditation value.[222] Ameren suggests that MISO should be directed to revise the tariff language to require that either the 120-day criterion *or* the Maintenance Margin is met, but not both.[223]

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[217] Entergy Coalition Protest at 13-14 (citing Smith Test. at 20-21).

[218] Consumers Energy Limited Protest at 2.

[219] East Texas Protest at 9; DTE Electric Protest at 10-11.

[220] Entergy Coalition Protest at 14; Consumers Energy Limited Protest at 3-5.

[221] Consumers Energy Limited Protest at 1.

[222] Entergy Coalition Protest at 14.

[223] Ameren Protest at 5-6.

130. Midwest TDUs argue that MISO has not explained why it requires 120 days between planned outages to receive a Tier 2 exemption. Midwest TDUs state that MISO's current Tariff specifically provides for an exemption from the forced outage rate adjustment in resource accreditation in this exact scenario, noting that, currently, a resource will be given an exemption if the market participant provides 120 days' notice and if there is adequate projected Maintenance Margin at the time the request is submitted. Midwest TDUs contend that MISO's proposal may make outage coordination harder, rather than easier, by effectively eliminating the option of scheduling planned outages during the 120-day windows if there is adequate Maintenance Margin during that time.[224] Midwest TDUs submits that, in a situation where a resource requires 30 days of non-consecutive outage, if one day in that 30 day period did not have a positive Maintenance Margin, a resource would be discouraged from splitting its planned outage in two parts to schedule around that one day because the second outage would not receive a Tier 2 Planned Outage exemption. Midwest TDUs argue that MISO's proposal to treat a resource as unavailable during that second outage bears no rational relationship to that resource's expected availability during times of need.[225] DTE Electric states that, compared to the current process, the proposal would limit the ability of market participants to plan outages and receive exemptions for accreditation impacts such that even prudently planned outages may not qualify for an exemption.[226]

131. The Mississippi Commission asserts that outage planning and coordination is an operational issue, not a marketplace issue, and that close coordination, rather than ambiguous price signals and penalties, will lead to better outage planning to avoid periods of shortage.[227] Clean Energy Coalition argues that planning solutions cannot address the underlying problem of scheduled maintenance events and that MISO should propose an operational solution to manage scheduling of outages that may include changes to outage protocols and Maintenance Margins.[228] Clean Energy Coalition contends that MISO has not conducted sufficient analysis to understand the implications of scheduled resource maintenance on grid reliability.[229] Clean Energy Coalition argues that MISO's main concern is the implications of scheduled resource maintenance on grid reliability and that MISO does not use LOLE modeling in a straightforward manner to

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[224] Midwest TDUs Protest at 16-17.

[225] *Id.* at 15-16.

[226] DTE Electric Protest at 9-10.

[227] Mississippi Commission Protest at 37.

[228] Clean Energy Coalition Protest at 4.

[229] *Id.*

assess the maximum level of capacity that can be out of service without affecting reliability.[230] Clean Energy Coalition asserts that MISO's proposal resorts to inappropriate modeling that develops seasonal planning reserve margins based on inconsistent resource metrics and flawed inputs. Clean Energy Coalition argues that changing risk profiles throughout the year will make it increasingly difficult for MISO to ensure LOLE targets are met when scheduled resource maintenance may result in insufficient availability of capacity during periods that historically had little risk.[231]

132. Clean Energy Coalition argues that MISO's outage proposal provides a blanket exemption from availability-based accreditation that allows units to avoid an "unavailable" evaluation for an historical RA Hour as long as it gives four months' notice of a planned outage, up to three times a year. Clean Energy Coalition contends that MISO's proposed exemptions severely limit the reliability value of MISO's proposal and gives resource owners little motivation to think twice before scheduling an outage, even at peak times.[232]

133. WEC Utilities state that MISO's proposed filing fails to address potential hoarding of planned maintenance outage margin. WEC Utilities note that the proposed tariff revisions do not include any language to ensure that a resource owner does not hoard Maintenance Margin thereby precluding any other resource owners from scheduling their own outages. WEC Utilities state that nothing in the Tariff or proposed Tariff prohibits a resource owner from scheduling a planned outage every year when it might only need a planned outage every other year; as proposed, the unneeded outage can be simply withdrawn with no penalty and, if the withdrawal of the planned outage occurs within the 120-day window, the resulting increase in Maintenance Margin created by the withdrawal would not be available for other resource owners.[233]

134. Midwest TDUs state that MISO's exemption approach results in different resources having different RA Hours, which, according to Midwest TDUs, further increases the disconnect between MISO's SAC accreditation proposal and an accurate measure of the hours of highest need in a given Season. Midwest TDUs contends that, to avoid this, MISO should truly exempt a resource that qualifies for a Tier 2 Planned

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[230] *Id.*

[231] *Id.*

[232] *Id.* at 16.

[233] WEC Utilities Comments at 8-9.

Outage exemption by treating it as if it were available during these hours for purposes of the accreditation determination.[234]

135. Midwest TDUs note that certain Tier 1 exemptions are given if a planned outage passes the No Harm Test. Midwest TDUs state that the No Harm Test includes, but is not limited to, outage approval compliance with all applicable operation guides, review of possible conflicting outages or system conditions, system capacity, and the criteria outlined in the BPM for Generator Outage. Midwest TDUs oppose deference of MISO's Tier 1 exemption criteria to the BPM, as well as the fact that MISO will consider additional unidentified factors beyond those in the BPM. Midwest TDUs add that, similarly, MISO's proposal allows MISO to, at its discretion, grant a Tier 1 Planned Outage exemption if a resource reschedules its Generator Planned Outage at MISO's request. Midwest TDUs argue that the language of these exemptions does not allow the Commission, or resource owners, to understand when MISO will grant Tier 1 exemptions, and, ultimately, how MISO will determine a resource's SAC. Midwest TDUs contend that MISO should be directed to provide greater detail in the Tariff describing the criteria for Planned Outage exemptions.[235]

136. Duke Energy and MISO TOs argue that MISO needs to provide more support for excluding prudently planned derates from accreditation exemptions.[236] Duke Energy states that, during the stakeholder process, it explained its concerns that to treat planned partial outages differently than full generator planned outages by not excluding hours with planned derates from the SAC calculation but doing so for full generator outages would result in an unjust, unreasonable, and unduly discriminatory accreditation calculation.[237] Midwest TDUs state that excluding partial outages from planned outage exemptions would unreasonably reduce a resource's accreditation because of properly coordinated partial outages, and it would create a problematic incentive to schedule full outages rather than partial ones.[238] Great River Energy requests clarification that planned outages scheduled to begin before September 1, 2022 will be granted both a Tier 1 and Tier 2 exemption.[239]

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[234] Midwest TDUs Protest at 12-13.

[235] *Id.* at 47-48.

[236] Duke Energy Comments at 3; MISO TOs Comments at 8.

[237] Duke Energy Comments at 4.

[238] Midwest TDUs Protest at 17-18.

[239] Great River Energy Comments at 2.

137. DTE Electric, Midwest TDUs, and Duke Energy protest MISO's proposal to cap a Schedule 53 Resource's maximum offer at its GVTC, arguing that the cap ignores a Schedule 53 Resource's available capacity.[240] Midwest TDUs assert that using GVTC values as a cap in the SAC methodology, even if those values are seasonally adjusted, is inconsistent with MISO's stated goal of "[u]tilizing offered availability and actual performance [to] provide[] an improved measure of expected availability for each Season."[241] Midwest TDUs state that a resource's capability may vary at different times due to temperature, humidity, and other conditions, and that operating conditions in late May can be much different than those in early March, even though both are within the Spring Season. Midwest TDUs assert that, just as it would be unreasonable to impose a cap on a resource's SAC based on an annual GVTC value that does not reflect capability within a particular Season, it is unreasonable to use a uniform GVTC throughout an entire Season.[242] Duke Energy asserts that MISO's proposed hourly GVTC cap creates a disincentive for reliable service at the top end of generator output and fails to give full accreditation value for the service actually provided to the grid in instances where a generator can and does operate above its GVTC limit.[243]

138. Duke Energy states that a unit's offered availability may be zero in a particular hour when the unit did generate power that was used and available to the market, potentially during times when that generation is needed most. Duke Energy explains that offered availability is commonly at zero during startup and shutdown when, per MISO's rules, generators are not permitted to enter offers. Duke Energy states that, in addition, there may be no offered availability when the generating unit is off-Automatic Generation Control returning from an outage, or entering an outage, but the unit may nevertheless be generating and producing energy. Duke Energy states it is common for a generator to be in-service, physically supporting the grid with its generation output, but have its offer show no availability, which will result in an understated value for accredited capacity. According to Duke, MISO's proposed availability metric would not provide any accredited availability to the generator in those circumstances, despite the fact that the generator actually injects net positive generation into the grid. Duke Energy contends that this will result in an understated value for accredited capacity, potentially

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[240] DTE Electric Protest at 14; Midwest TDUs Protest at 18-19; Duke Energy Comments at 14.

[241] Midwest TDUS Protest at 18-19 (citing McFarlane Test. at 15).

[242] *Id.* at 19.

[243] Duke Energy Comments at 14.

increasing cost for customers, and also create a problematic misalignment of incentives.[244]

139. WEC Utilities, DTE Electric, Alliant, and MISO TOs raise concerns that MISO's proposal lacks a mechanism to transition Generator Interconnection Agreements (GIA) to higher Winter capacity values, explaining that some thermal generation resources, such as combustion turbine and combined-cycle generators, have Winter output capabilities that are higher than their Summer capabilities because of lower ambient air temperatures.[245] DTE Electric states that, while MISO recognizes that GVTC values are necessary to appropriately reflect non-Summer capabilities, MISO's proposal fails to recognize that Interconnection Service limitations will also be affected by a more granular construct.[246] WEC Utilities state that some GIAs, especially those that were executed several years ago, may reflect only Summer operating conditions and that the proposed seasonal approach to resource adequacy noted in the deliverability limits of these outstanding GIAs may limit the Winter capacity of some resources.[247] Alliant states that, as a result, as resources make their way through the multi-year interconnection process, significant amounts of existing capacity will be left unaccounted, but available. Alliant argues that MISO's rush to implement its proposal in one year could create artificial resource shortfalls, which could, in turn, force unreasonable costs on customers that would not occur if a complete and orderly transition to a seasonal construct was required.[248] In addition, MISO TOs contend that the SAC proposal may allow for SAC values to be higher than a resource's Network Resource Interconnection Service (NRIS) rights.[249]

140. Some commenters dispute MISO's proposed use of a 24-hour resource lead time in the SAC proposal. For example, Midwest TDUs state that, for an offline resource where "the sum of the Start-Up Time and Start-Up Notification Time Offers exceeds 24 hours," MISO proposes to treat its Hourly Emergency Maximum Limit or Targeted Demand Reduction Level as zero. Midwest TDUs note that this means that longer-lead time resources will be treated as if they were completely unavailable during these critical

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[244] *Id.* at 13-14.

[245] WEC Utilities Comments at 9; DTE Electric Protest at 14; Alliant Protest at 6; MISO TOs Comments at 5.

[246] DTE Electric Protest at 14.

[247] WEC Utilities Comments at 9.

[248] Alliant Protest at 6-7.

[249] MISO TOs Comments at 5.

RA Hours. Midwest TDUs argue that MISO has not demonstrated why it proposes to treat an offline, but available, resource with a 26-hour lead time the same as a resource that is unexpectedly unavailable due to a non-exempt outage, as, according to Midwest TDUs, this fails to reflect the value of longer-lead time resources. Midwest TDUs contend that, if these resources have submitted offers but are offline due to MISO's decision not to commit them, that should not negatively impact their accreditation. Midwest TDUs add that many of the situations MISO seeks to address, such as extreme weather events, can be anticipated more than 24 hours in advance.[250]

141. Midwest TDUs contend that MISO should be required to take steps to facilitate the ability of these longer-lead time resources to avoid this extreme, negative impact on accreditation. Midwest TDUs explain that, unless these resources have been committed through the Reliability Assessment Commitment process, which is conducted seven days ahead of the operating day, or the Day-Ahead Reliability Assessment Commitment process, these resources must act proactively to self-commit in order to avoid a hit to their accreditation. Midwest TDUs argue that, if MISO is going to impose a harsh, bright-line threshold of 24 hours, it should provide resource owners with timely information about potential upcoming RA Hours so that they can make informed decisions about whether to self-commit.[251]

142. Entergy Coalition states that MISO's 24-hour lead time proposal would be impractical for many otherwise valuable resources due to either physical limitations or, more often, constraints and costs of contracting firm natural gas supply and delivery to those resources. Entergy Coalition argues that, as a result, the SAC proposal would likely result in substantial increased self-commitment of comparatively inefficient resources to avoid loss of accreditation and potentially significant increased fixed contractual costs for fuel, resulting in less efficient overall use of resources within the MISO region, contrary to MISO's broader goals to provide economic benefits to market participants.[252]

143. While supporting the filing overall as just and reasonable, Potomac Economics argues that treating offline resources with up to a 24-hour lead time as available up to their offered output overvalues less flexible, long lead time units. Potomac Economics asserts that tight conditions typically emerge due to load forecast errors, wind forecast errors, large unit forced outages, or other factors that are not known far in advance.[253]

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[250] Midwest TDUs Protest at 20-21.

[251] *Id.* at 21.

[252] Entergy Coalition Protest at 8.

[253] Potomac Economics Comments at 8.

According to Potomac Economics, most emergencies are recognized and declared between 30 minutes and 6 hours in advance.[254] Therefore, Potomac Economics contends that, despite MISO's assertion that MISO could have reasonably committed a resource in the Day-Ahead Market or Forward Reliability Commitment Process, if most reliability threats emerge during the operating day, then offline resources whose lead times are too long to mitigate the reliability threat provide no value in such events.[255]

144. Some commenters express concerns about MISO's proposal to use a UCAP/ISAC ratio to calculate the SAC accreditation for Schedule 53 Resources. COMPP contends that MISO's use of the UCAP/ISAC ratio highlights inconsistencies between capacity accreditation and MISO's LOLE studies. COMPP explains that, while MISO's Seasonal LOLE Study will determine the amount of UCAP MISO needs to procure to maintain resource adequacy, MISO's Capacity Resources will now be accredited ZRCs based on their SAC. COMPP avers that UCAP does not equal SAC, and the failure to align LOLE metrics with accreditation metrics amounts to MISO's proposal being unjust, unreasonable, and unlawful.[256] COMPP submits that, while MISO recognizes this disconnect, and proposes a conversion ratio between SAC value and the UCAP amount, MISO should instead be directed to conduct a LOLE study that determines needed capacity volumes using the same definition used in the Auction.[257] COMPP notes that no other organized market has approved separating the way capacity is defined in underlying reliability studies from the way capacity is procured.[258] Clean Energy Coalition argues that this ratio adjustment has not undergone independent analysis and its impact on overall system reliability is unclear.[259]

145. Clean Energy Coalition and Midwest TDUs submit that MISO's use of the UCAP/ISAC ratio is discriminatory against non-Schedule 53 Resources. Midwest TDUs assert that non-Schedule 53 Resources are similarly situated to Schedule 53 Resources in terms of accreditation, as well as the relationship between that accreditation and the methodology for determining Reserve Requirements. Midwest TDUs argue that MISO has not supported its proposal to apply a conversion ratio to some resources with accreditation based on historical performance but not others and that, as a result, MISO's

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[254] *Id.* at 9.

[255] *Id.* at 10-11.

[256] COMPP Protest at 12.

[257] *Id.*

[258] *Id.*

[259] Clean Energy Coalition Protest at 8.

proposal is unduly discriminatory and may distort the relative share of accreditation between similarly situated resources.

146. Clean Energy Coalition contends that, after ISAC values are calculated, MISO is proposing to use the UCAP/ISAC ratio to shift the supply curve of Schedule 53 resources to the right, benefitting thermal resources relative to renewable resources.[260] Clean Energy Coalition argues that Schedule 53 resources with better historical availability than their peers will be rewarded, whereas Schedule 53 resources that have worse historical availability will be penalized, while an average Schedule 53 resource will receive a capacity credit equal to its UCAP value, which takes into account forced outages only. Clean Energy Coalition asserts that MISO has not clarified whether widening the accreditation gap between the best performing and worst performing Schedule 53 resources will require the best performing resources to contribute to reliability at levels that exceed their nameplate, and whether the contribution would help or hurt reliability.[261] Clean Energy Coalition further argues that, while the total amount of Schedule 53 Resources accredited under this proposal would be unchanged, it is counterintuitive that high performing resources could be accredited at a level that exceeds their physical ability to perform in an effort to "make up" for the poorer performing units.[262] Similarly, Entergy Coalition contends that the use of the UCAP/ISAC ratio means that under the proposal a resource can have a final accreditation rating exceeding its GVTC. Entergy Coalition suggests that this is another indication that MISO's SAC proposal is a poor indicator of resource capability.[263]

147. COMPP argues that, under MISO's proposal, internal generation resources are accredited using the SAC methodology, while external resources are accredited using a seasonal GVTC methodology. COMPP submits that it is unclear why internal and external resources are subjected to different treatment, as external resources that commit capacity to MISO but fail to make themselves available during RA Hours will not be penalized.[264]

148. Several entities argue that intermittent resources should be accredited using MISO's proposed SAC methodology. Ameren and DTE Electric contend that the proposal to apply the SAC provisions to only Schedule 53 Resources and to except other

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[260] *Id.*

[261] *Id.*

[262] *Id.*

[263] Entergy Coalition Protest at 7-8.

[264] COMPP Protest at 15.

resources until a future filing is made does not result in comparable treatment of all resource types and undermines the purpose of requiring accreditation.[265] Minnesota Power supports updating the wind and solar accreditation method to align with the SAC methodology to avoid discriminatory resource planning criteria.[266] COMPP states that, while MISO attempts to ease concerns by committing to a future ELCC effort, MISO has not started work on that effort and it could take years before an improved ELCC construct is adopted.[267] DTE Electric notes that the resources MISO excludes from the proposal are the same resources that MISO cites as in need of change.[268] MISO TOs state that, although MISO indicated that it would address accreditation enhancements to non-Schedule 53 Resources in the future, the Commission should require MISO to start stakeholder discussions prior to the effective date.[269] WEC Utilities argue that MISO has proposed an innovative SAC accreditation methodology for Capacity Resources that will be based on availability during times of need, which should be applied to all resources, not just Schedule 53 Resources.[270]

149. Clean Energy Coalition argues that MISO does not apply consistent risk metrics across different types of resources to evaluate a resource's contribution to risk mitigation.[271] Clean Energy Coalition further argues that MISO's use of average offered MW during times of system risk to measure thermal resource availability is an *ex post* approach based on actual historical performance to assess tight margin hours and measure LOLP or LOLE risk.[272] Clean Energy Coalition then argues that MISO will continue to use ELCC to calculate seasonal accreditation of wind resources (and potentially solar in the future).[273] Clean Energy Coalition contends that ELCC is a probabilistic metric that

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[265] Ameren Protest at 4; DTE Electric Protest at 15-16.

[266] Minnesota Power Comments at 2.

[267] COMPP Protest at 15.

[268] DTE Electric Protest at 2-3, 16.

[269] MISO TOs Comments at 10.

[270] WEC Utilities Comments at 6-7

[271] Clean Energy Coalition Protest at 5.

[272] *Id.*

[273] *Id.* (citing MISO, MISO's Responses to Stakeholder Questions, at 8 (Oct. 5, 2021) ("Further enhancements on solar accreditation will continue at the RASC after the RAN RA construct reform filing to evaluate ELCC or similar availability-based accreditation approaches."),

is based on a statistical expected value and represents an *ex ante* or forecasted capacity. Clean Energy Coalition further argues that MISO's proposal is deficient since it does not address seasonal accreditation for energy storage resources.[274]

150. Clean Energy Coalition further argues that this discrepancy persists even if a wind and thermal resource's performance were identical. Clean Energy Coalition argues that MISO's proposal to use alternative accreditation proposals for different resource types is not consistent with good market design, does not provide consistent signals for resources to respond to periods of reliability risk, and may not provide the level of reliability that MISO seeks.[275] Clean Energy Coalition further argues that MISO's proposal is unjust, unreasonable, and unduly discriminatory since it will compensate thermal generators more than other resources for providing the same amount of capacity.[276]

151. Clean Energy Coalition argues that MISO does not use the same input data to assess periods of risk to calculate thermal and wind resource accreditation. Clean Energy Coalition argues that under MISO's proposal, thermal resources would get credit based upon actual offers during tight margin hours, while wind resources would get credit based upon an expected value of generation during different hours.[277] Clean Energy Coalition argues that the use of ELCC for wind means that risk periods that wind can potentially mitigate are hours when there is a LOLP, measured *ex ante*, whereas tight margin hours for thermal resources, measured *ex post*, are not necessarily the same time periods.[278] Clean Energy Coalition argues that the proposal is therefore not comparing a resource's available capacity on the same basis.[279] Clean Energy Coalition explains that thermal resources are credited based on their performance during tight margin hours that may correspond with LOLP hours. Clean Energy Coalition then argues that MISO's own analysis shows that tight margin hours do not always occur during LOLP hours.[280] Clean

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https://cdn.misoenergy.org/20211006%20RASC%20Supplemental%20Q%20and%20A%20Document595123.pdf).

[274] *Id.* (citing McFarlane Test. at 31-33).

[275] *Id.*

[276] *Id.* at 6.

[277] *Id.* at 7.

[278] *Id.* at 6.

[279] *Id.*

[280] *Id.* at 6-7.

Energy Coalition argues that MISO has not examined whether it is better to pool tight margin hours and LOLE hours and use those periods to assess all resources, or adopt either the LOLP approach or the tight margin approach and apply it to all resources.[281]

152. Clean Energy Coalition argues that the Commission previously accepted MISO's ELCC construct for wind resource accreditation on an annual basis and that the approach would be inappropriate for calculating a seasonal construct as currently proposed by MISO.[282] Clean Energy Coalition argues that current flaws in MISO's ELCC methodology may credit wind resources during hours of no risk while not crediting wind resources for contributions during periods of high risk.[283] Clean Energy Coalition then argues that MISO's SAC proposal arbitrarily re-allocates annual LOLP risk to each Season by assuming that 25% of the annual risk occurs in each of the four Seasons, in direct contrast to the results of MISO's own LOLP modeling and the need for a seasonal construct.[284] Clean Energy Coalition then states that MISO's own analysis shows that risk is not equally spread into each of the four Seasons, creating periods of artificial risk.[285] Clean Energy Coalition finally argues that this arbitrary allocation method removes times of risk that were identified by the annual LOLE calculations used in the status quo approach.[286]

153. Clean Energy Coalition argues that MISO's proposal is unjust, unreasonable, and unduly discriminatory because it does not expressly consider fuel supply risk for coal and natural gas resources but does consider fuel supply risk for wind and solar resources. Clean Energy Coalition argues that MISO's proposal does not explain whether, or to what extent, the availability-based method for determining thermal resource capacity accreditation captures past limitations on fuel availability and whether historic fuel availability is representative of future periods given changes in the resource mix, extreme weather patterns, and other factors.[287] Clean Energy Coalition argues that, in contrast, the ELCC methodology applied to wind resources and the availability-based accreditation for solar resources does take into account fuel supply risks since the assessment of their

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[281] *Id.* at 7.

[282] *Id.* at 13.

[283] *Id.*

[284] *Id*.

[285] *Id.*

[286] *Id.* at 14.

[287] *Id.* at 7.

ability to deliver power is directly tied to whether they have fuel (sun or wind) to generate power.[288]

154. Midwest TDUs state that MISO will determine the SAC of wind and non-wind resources, based on particular hours in each Season. Midwest TDUs contend, however, that MISO's proposed Tariff language merely states that SAC accreditation for Dispatchable Intermittent Resources and Intermittent Generation "will be determined by the Transmission Provider based on historical performance, availability, and type and volume of interconnection service, for each Season in accordance with the BPM for Resource Adequacy."[289] Midwest TDUs assert that, given the detailed methodology MISO is proposing to include in the Tariff for Schedule 53 Resources, it is not appropriate for MISO to propose vague changes to the accreditation process for intermittent resources that it will implement through its BPM. Midwest TDUs contend that resources should be on a level-playing field in terms of the level of detail the Tariff provides in terms of the accreditation methodology MISO applies, and the extent to which the Commission has reviewed and accepted those accreditation methodologies. Midwest TDUs state that including these critical details regarding accreditation provides certainty and ensures that the Commission has determined they are just, reasonable, and unduly discriminatory.[290]

155. Industrial Customers argue that MISO has not demonstrated that its proposal to increase the number of calls on LMR DRs who participate as an LMR are required to allow during the Planning Year from 10 to 16 to receive 100% capacity accreditation for the full Planning Year is just and reasonable.[291] Industrial Customers assert that MISO's transmittal letter and prepared testimony provide no information or analysis with respect to how MISO determined the need for 16 LMR calls per Planning Year for LMRs that are accredited for a full Planning Year. Industrial Customers contend that MISO completely ignores the fact that for an LMR that participates in all four Seasons of a Planning Year, the sum of the required allowed seasonal calls amounts to 16 calls per Planning Year, versus the currently required 10 calls per Planning Year.[292]

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[288] *Id.*

[289] Midwest TDUs Protest at 49 (citing MISO, FERC Electric Tariff, Module E-1, § 69A.4 (33.0.0) (proposed)).

[290] *Id.*

[291] Industrial Customers Protest at 4-5.

[292] *Id.* at 6.

156. Industrial Customers state that MISO identified the basis for the proposal in its initial August 4, 2021 presentation to the MISO RASC. According to Industrial Customers, MISO identified that the basis of its proposed requirement for five calls in Summer, three calls in Fall, five calls in Winter, and three calls in Spring is the result of MISO's 2020 LOLE analysis that it performed to support its proposal in Docket No. ER20-1846-000, which the Commission accepted in August 2020, to require LMR DRs receiving a 100% capacity accreditation for a full Planning Year to allow MISO 10 interruption calls per Planning Year.[293] Industrial Customers argue that MISO is essentially proposing to reinterpret its conclusion from the results of MISO's 2020 LOLE analysis to support further increasing the required number of allowed MISO interruption calls on LMR DRs that receive a 100% capacity accreditation for a full Planning Year to 16 calls per Planning Year. Industrial Customers argue that the results of MISO's 2020 LOLE analysis do not support requiring 16 interruption calls per Planning Year given MISO's very recent past interpretation of these results and given the saturation in the above capacity credit curve results beyond 10 calls per Planning Year.[294]

157. Industrial Customers contend that no more than 10 interruption calls in total, in any given Planning Year, should be required of any LMR DR that is receiving 100% capacity accreditation for an entire Planning Year. Further, Industrial Customers assert that MISO has historically never called any LMR more than three times in a given Planning Year. Industrial Customers argue that MISO's proposal would result in an unnecessary chilling of LMR DR participation merely because the risk of 16 interruptions would exist, even though MISO has not demonstrated any operational basis for calling more than four or five interruptions in any given Planning Year.[295]

158. Industrial Customers emphasize that the interruption of electric service when called upon by MISO results in significant costs and operational disruptions to these end-use customers. Industrial Customers state that such costs include, but are not necessarily limited to, lost production, process restart costs, and the cost for consumables, where necessary, to allow the interruptions. With respect to operational disruptions, Industrial Customers assert that, while the minimum MISO Tariff requirement for an LMR DR to remain curtailed is only at least four consecutive hours, many industrial facilities are

[293] *Id.* at 6-7 (citing *Midcontinent Indep. Sys. Operator, Inc.*, 172 FERC ¶ 61,138 (2020) (LMR DR Accreditation Order)).

[294] *Id.* at 7-8.

[295] *Id.* at 8-9.

incapable of ramping up their processes after only four hours of being down such that once they are shut down, they may have to stay at that level for 12 hours or longer.[296]

159. Steel Producers explain that the Tariff requires Demand Resources maintain interruptions for at least four continuous hours, meaning that MISO would effectively increase the amount of hours of interruption from a minimum of 40 to 64. Steel Producers argues that this increase is not supported by any new analysis.[297]

160. The Mississippi Commission argues that the SAC proposal, which it asserts favors quick start-flexible generation units over base-loaded gas and nuclear generation, will marginalize the value of existing generation and drive state utility investment toward MISO's preferred resources. The Mississippi Commission asserts that MISO's proposal would create an artificial shortage of generation that must be filled by flexible ramping generation that is needed in MISO North to address reliability concerns caused by overreliance on wind resources. However, the Mississippi Commission argues, MISO has no authority to marginalize generation that state regulatory authorities have sited, authorized for construction and cost recovery, and that are used to serve state load, based on operating characteristics.[298] The Mississippi Commission asserts that neither the Commission nor RTOs/ISOs may direct a utility to construct a specific type of generation resource, and that the SAC proposal indirectly does what MISO lacks the authority to do.[299]

161. Entergy Coalition contends that MISO's proposal will disrupt LSE resource planning activities and frustrate the state regulatory authority oversight and planning objectives and notes that the Commission has emphasized that the design of MISO's Auction is complementary to LSE integrated resource planning that takes place subject to the rules and procedures of state regulatory authorities.[300] Entergy Coalition argues that the unpredictability embedded in MISO's proposal will make it extremely difficult for: (1) state regulatory authorities and LSEs to replicate and predict future outcomes of

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[296] *Id.* at 9.

[297] Steel Producers Limited Protest at 4.

[298] Mississippi Commission Protest at 31.

[299] *Id.* at 32 (citing 16 U.S.C. § 824(b)(1); *Hughes v. Talen Energy Mktg, LLC.*, 136 S. Ct. 1288, 1292; *see also Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 205 (1983)).

[300] Entergy Coalition Protest at 9 & n.19 (citing *Midcontinent Indep. Sys. Operator, Inc.*, 162 FERC ¶ 61,176 (2018), *order on reh'g,* 170 FERC ¶ 61,215 (2020)).

MISO's proposal; and (2) for LSEs to conduct long term planning consistent with the objectives of the state regulatory authorities that regulate them.[301]

162. Duke Energy argues that MISO has not shown how the proposed SAC accreditation calculation will accurately account for jointly owned units.[302] Duke Energy submits that, in data MISO provided during the stakeholder process, it is not clear that MISO will accurately calculate the capacity accreditation of Capacity Resources that are jointly owned.[303]

c. MISO February 10 Answer

163. MISO reiterates that its proposal will result in demonstrable and effective increases in reliability, stating that protestors fail to recognize the improvements to reliability described in MISO's filing. MISO states that its SAC accreditation proposal will increase system reliability in multiple ways and is a substantial improvement over the current UCAP approach. MISO states that first, establishing seasonal SAC values will provide improved incentives for resources to be available outside of the traditional Summer peak months, in contrast to MISO's current UCAP approach which allows for resources to get capacity credit year-round without having to be available year-round outside of the Summer months. MISO adds that the three-year expected forced outage rating used for a resource's UCAP is highly diluted as it considers all hours over a three-year period and does not give MISO operators a true sense of what capacity can be relied upon when system conditions get tight. MISO contends this is especially critical outside the Summer months where MISO has seen an increase in MaxGen Events.[304] MISO states that establishing seasonal requirements and seasonal SAC values provides increased visibility to MISO operators of resource availability throughout the Planning Year, which will give operators more confidence in what Planning Resources they can expect and count upon when system conditions tighten. MISO adds that its SAC accreditation proposal will provide resources with incentives to be available during times of need because of the 80% weighting of Tier 2 RA Hours. MISO states that aligning accreditation incentives with real-time system needs will enhance operators' confidence in the availability of resources, further improving reliability. MISO states that under its

[301] *Id.* at 10.

[302] Duke Energy Comments at 17.

[303] *Id.*

[304] MISO February 10 Answer at 21-22.

proposal, as time goes on, average resource availability will improve, giving operators more resources to manage tight system conditions, improving reliability even further.[305]

164. MISO explains that its current UCAP approach only accounts for forced outages and derates not determined to be Outside Management Control and, as such, does not fully reflect real-time resource availability—especially during times of need. MISO asserts that using the Hourly Emergency Maximum Limit that resources submit in the Real-Time Market, which MISO proposes to use, among other things, for accreditation more accurately represents a resource's expected availability during tight system conditions than the current UCAP methodology.[306] MISO states that its proposal better aligns planning and operations efforts to ensure capacity sufficiency, closing a gap which has contributed to an overestimate of resource availability. MISO states that, ideally, MISO would be able to know exactly a resource's availability ahead of time, but, without a crystal ball, historical data is the best indicator of future performance.[307]

165. In response to arguments suggesting that MISO's proposed implementation timeline is unreasonable, MISO asserts that its proposed timeline balances the urgent need to address growing reliability risks with the countervailing stakeholder need for time to adjust to the new requirements. MISO submits that, the PJM capacity market precedent regarding a transition mechanism is inappropriate because MISO's proposal is fundamentally different from the changes PJM made to its Reliability Pricing Model for Capacity Performance Resources. First, MISO states that application of the UCAP/ISAC ratio will maintain the overall supply and demand balance at the footprint level, while aligning relative accredited values among different resources. Second, MISO states that Capacity Resources have a must offer obligation under the current resource adequacy requirements, therefore their offered capacity should already generally align with their availability and should already be driven by existing incentives provided by MISO's energy and ancillary services market. Third, MISO states that the proposed transition plan retains the RAN Phase 1 exemptions for generator outages in the initial years of SAC calculations, which MISO asserts are comparable to, if not more lenient than, the proposed Tier 1 and Tier 2 exemptions contained in the proposal.[308] Further, MISO explains that the three-year lookback period, which will begin in the 2023/2024 Planning Year, will only include outage behavior and resource availability that occurred after RAN Phase 1 was accepted and implemented. MISO states that, by that time, the evolving risks to reliability and focus on resource availability during times of need throughout the

[305] *Id.* at 22.

[306] *Id.* at 24-25.

[307] *Id.* at 25.

[308] *Id.* at 7-8.

year were well established and it is reasonable to consider resource performance from this period.[309]

166. In response to arguments that it is inappropriate for MISO to use historical offer and outage data from before SAC implementation because generation owners' operational decisions were based on the market construct and accreditation framework in place at the time, MISO submits that system operators need to know what is truly available to meet real time system conditions, and waiting or prolonging the use of data until after the implementation date of the SAC proposal will continue to provide MISO operators with a false sense of what is truly available. MISO adds that it has also provided a transition period to the 80% weighting of availability in prior Tier 2 RA Hours, which is intended to mitigate some of this concern.[310]

167. MISO states that it has provided detailed data to stakeholders, including seasonal SAC value and requirements at the portfolio level, unit-level SAC values on a seasonal basis, and extensive and detailed data for at least one individual resource for each stakeholder, including all the inputs and calculations necessary to allow stakeholders to independently validate how MISO derived the SAC values for that resource. MISO states that this information was provided more than once to stakeholders that requested the data over the course of the conceptual design.[311]

168. MISO disputes arguments suggesting that the proposal's approach to risk hour identification and compensation of resources for reducing loss of load risk is flawed by arguing that MISO has worked deliberately in recent years to explain and lay out evidence that changes to the generation portfolio, load patterns, and weather are driving uncertainty and variability that necessitate accreditation approaches that account for these changes' risks and their timing. MISO states that in the past it was considered sufficient to have enough capacity to cover a system's expected peak load, with a reasonable Reserve Requirement. MISO adds that it was also reasonable to assume that the same amount of capacity would also be sufficient during non-peak times of the year. MISO contends that, because MISO has experienced 41 MaxGen Events since June 2016 with more than 60% of those MaxGen Events occurring outside of the Summer Season, this is no longer a safe assumption. MISO states that it worked with stakeholders and the Market Monitor to craft a proposal that accounts for LOLE risk and carefully considers resource performance in each Season and the incentives needed to improve availability during times of need. MISO states that instead of being rigid, the proposal dynamically

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[309] *Id.* at 29.

[310] *Id.*

[311] *Id.* at 31.

accounts for changing risks by basing most of a resource's accreditation on its availability during RA Hours that reflect the times of greatest need.[312]

169. MISO submits that its original proposal weighted Tier 2 hours at 100% toward a resource's offered availability, but stakeholders requested a method that also recognized a resource's reliability contribution during non-RA Hours. MISO states that it recognizes the value of general availability, especially as it supports needed generator planned outages; however, as the Market Monitor's analysis of the current UCAP method illustrates, general availability at all times does not adequately reflect availability during times of highest risk and availability during times of highest risk better represents a resource's true reliability value. MISO states that, as a result, MISO responded by developing the two-tier accreditation proposal, weighting offered availability in Tier 2 RA Hours at 80% to emphasize each resource's reliability contribution during times of greatest reliability needs.[313]

170. In response to comments regarding the potential impacts of missing an RA Hour due to Market Participants' self-commitments decision, MISO states that it is worth noting that the impacts to future accreditation and capacity revenues can be estimated by considering the probability of missing RA Hours and an expectation of Auction Clearing Prices and the reduction in accreditation over the upcoming three planning years. MISO adds that the quantified impacts of a resource missing an RA Hour and the potential impact to future capacity revenues can be compared to other relevant costs and energy market revenues to help inform decisions that impact resource operation and availability.[314]

171. MISO disputes arguments that MISO's proposal introduces unreasonable volatility into accreditation. MISO asserts that, by design, more resource level volatility with the proposed SAC accreditation methodology would be expected, but in aggregate the proposal leads to very little volatility at the MISO Region-wide level from year to year, especially over time. MISO states that its proposal leads to less than 2% volatility at the MISO Region-wide level, in part because of the application of the UCAP to SAC conversion ratio. MISO states that its proposal reduces the potential for individual resource volatility by retaining the three-year lookback period, which helps ensure that a resource's accreditation is not dramatically reduced as a result of a couple of bad days during a Season. MISO states that a key consideration for market participants is the stability of the accreditation of their resource portfolio in a Zone or subregion rather than

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[312] *Id.* at 36-37.

[313] *Id.* at 25-26.

[314] *Id.* at 35-36.

the higher volatility expected from individual resources, which may move up or down due to specific conditions that impacted a particular resource's availability.[315]

172. MISO argues that its proposal will allow regulatory authorities and LSEs to continue to be able to replicate and predict future outcomes from the proposed SAC accreditation methodology and LSEs will still be able to conduct long term planning consistent with the objectives of the state regulatory authorities that regulate them. MISO states that resources may experience some volatility from one year to the next in the amount of accreditation they receive, but, on an aggregate basis, MISO does not expect large swings, especially as outage behavior changes and resources avoid unavailability during times of need.[316]

173. With regard to arguments that MISO's use of the AAOC may not accurately represent a resource's availability in a particular Season, MISO states that it believes that the use of RA Hour availability during out-of-Season RA Hours in a Planning Year is a reasonable substitute in the determination of accreditation as AAOC reflects actual resource availability during tight conditions throughout the year. MISO states that, while some stakeholders suggested using all-hours availability during the Season to "backfill" RA Hours, MISO believes that approach would inappropriately dilute the assessment of a resource's availability during tight conditions because it substitutes the resource's availability during non-tight conditions. In addition, MISO states that it does not support WEC Utilities' suggestion to use a Seasonal UCAP when there is a deficiency in RA Hours in a particular Season because, according to MISO, UCAP does not fully reflect a resource's actual availability, which is why MISO has proposed its accreditation reforms.[317]

174. MISO states that it is necessary to have a minimum number of RA Hours to support stability of accreditation values and avoid situations where a resource loses most of its capacity value for the Season because it happened to not be available on the one or two days during that Season's RA Hours. MISO asserts that the use of AAOC to backfill RA Hours is therefore appropriate when a Season has deficient RA Hours.[318]

175. MISO disputes arguments that in-Season RA Hours could be double counted in determining a resource's accreditation. MISO states that for any Season that lacks sufficient RA Hours, set at 65 hours minimum, the SAC accreditation will augment the

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[315] *Id.* at 20.

[316] *Id.*

[317] *Id.* at 27-28.

[318] *Id.* at 28.

deficient number of hours less than 65 for that resource with its AAOC over the tightest 3% of hours during the year, or 260 hours. MISO submits that, while referencing availability outside the Season is not the ideal metric, it is a reasonable proxy with which to supplement needed resource performance data. MISO adds that to the extent any of the Seasonal RA Hours are also in the set of Annual RA Hours, this would not statistically constitute double counting because the individual hours would be 1/65th (1.538%) of the resource performance for any seasonal RA Hour but would only be 1/260th of the AAOC, which itself would account for 1/65th (0.006% combined) of the resource performance in Tier 2. MISO adds that, even in the unlikely event that there were only 1 seasonal RA Hour, that hour would only account for 1.913% of the resource performance, which is less impactful than counting that same RA Hour twice. MISO states that, regardless, it is reasonable and appropriate to include these RA Hours in both cases as they successfully represent seasonal and annual availability during high-risk hours.[319]

176. With regard to transparency for planned outages, MISO states that it has been publishing information for years about submitted planned outages in its Maintenance Margin tool with results posted on the MISO Open Access Same-Time Information System (OASIS) every weekday. MISO states that in particular, the transparency report MISO provides on OASIS shows the total amount of submitted planned outages for future days and an after-the-fact accounting of the actual realized amount of planned outages for historical days, which is provided separately for each sub-region.[320]

177. MISO states that, as part of the RAN Phase 1 Tariff changes, a planned outage currently receives an exemption from being included in a resource's future accreditation by: (1) submitting the outage 120 days or more in advance; or (2) if there is positive Maintenance Margin for the duration of the outage. MISO argues that, rather than continuing this either-or approach, MISO proposes that both conditions from RAN Phase 1 should be met in order to completely disregard a unit's unavailability when it is on a planned outage during the times of greatest need.[321]

178. MISO disagrees with arguments that its proposal creates incentives for resources to delay full or partial outages. MISO states that, currently, the vast majority of forced outages count against accreditation without consideration of their timing and impact, and, as a result, the precipitating event for many MaxGen Events is higher than expected forced outages, especially during extreme weather or capacity scarcity. MISO asserts that under the proposal, forced outages during an RA Hour are much more impactful than

[319] *Id.* at 29-30.

[320] *Id.* at 11.

[321] *Id.* at 16.

under the current accreditation rules, which will create incentives for decisions such as preventive maintenance, winterization, and fuel assurance that will ultimately help avoid unavailability during RA Hours.[322] MISO submits that currently, a unit on a forced outage for one day would see an impact of .1% of potential UCAP accreditation, whereas under the proposal a unit missing 8 RA Hours out of the target 195 hours of a Season (accounting for the three-year averaging) amounts to 4.1% of the Tier 2 accreditation, which comprises 80% of the Seasonal SAC accreditation. MISO argues that the higher impact on accreditation from forced outages aligns with the intent of MISO's proposal to base accreditation on resource availability during times of needed.[323]

179. MISO suggests that it may not be prudent for generators to push needed outages out 120 days to secure a full exemption, and that, if delaying an outage is expected to risk grave harm, then the resource can and should do what it deems necessary. MISO states that, if instead the outage is not urgent and a resource is confident that there is little risk of capacity scarcity due to sufficient Maintenance Margin or other considerations, then taking an outage with a Tier 1 exemption or no exemption at all poses little if any risk to its accreditation. MISO contends, however, that should an RA Hour occur despite expectations of sufficient capacity, it is proper for accreditation to consider that the Resource Adequacy Requirements resource was not available when it was needed and had not sufficiently coordinated to obtain a Tier 2 exemption.[324]

180. MISO disagrees that its proposal will discourage generation owners from performing prudent maintenance activities. MISO states that its proposal provides exemptions for outages planned well in advance (i.e., 120 days), and, even if an outage is not planned well in advance, that does not mean a resource will automatically see a huge effect on accreditation due to MISO's proposed tiered accreditation and because a resource can choose not to participate in that Season's Auction. MISO states that it disagrees that resource owners will push planned outages off because the SAC proposal provides incentives for those resource owners to be available and minimize outages. MISO states that delaying outages could lead to future forced outages that may be catastrophic in nature and result in little or no future credit for that resource.[325]

181. MISO argues that its proposal does not fail to address the potential that a resource will hoard the Planned Outage Maintenance Margin because the proposal builds on its current generator outage provisions, which include protections against a generator

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[322] *Id.* at 17-18.

[323] *Id.* at 18.

[324] *Id.* at 18-19.

[325] *Id.* at 21.

submitting frequent or long planned outages that did not reflect their actual outage needs. MISO states that, under its proposal, outages will not be considered timely and will not secure the related exemption if they occur less than 120 days from the end of the previous outage. MISO states that, while it is true that room for planned outages can be scarce due to capacity scarcity, MISO carefully coordinates outages and the proposal provides incentives for scheduling the duration of an outage during times of sufficient margin.[326]

182. MISO contends that its proposal does not unduly discriminate against certain resource types. MISO explains that under the current proposal non-Schedule 53 Resources will receive a SAC value based on resource type consistent with their current accreditation rules adjusted for each specific Season. MISO states that non-Schedule 53 Resources already receive credit based on their availability; therefore, MISO's proposed changes to the accreditation for Schedule 53 Resources would better align the accreditation for all resource types than the current UCAP approach that has been approved by the Commission as just and reasonable. MISO states that it recognizes that there are improvements that can be made to the accreditation of non-Schedule 53 Resources and has already commenced renewable accreditation discussions with stakeholders.[327]

183. In response to Clean Energy Coalition's claim that MISO arbitrarily allocates 25% of the annual LOLE risk to each Season to calculate seasonal wind ELCC, MISO explains that the purpose of LOLE risk target used in the wind ELCC accreditation calculation is fundamentally different from the risk target used in determining seasonal Reserve Requirements. MISO states that the ELCC calculation involves modeling and solving two cases, one with wind and one without wind, to the same reliability LOLE target in order to have an accurate comparison between the two cases to determine the reliability contribution of wind. MISO states that the LOLE target for the ELCC analysis needs to be large enough to produce a sufficient sample size of LOLE risk days to accurately calculate wind ELCC value. MISO states that it has performed a range of sensitivity analysis on various LOLE risk targets for the ELCC calculations and found that using a LOLE target of 0.025 day per year produces sufficient data samples for each Season and stabilizes seasonal ELCC values for wind resources.[328]

184. MISO explains that it proposes capping the Real-Time Emergency Maximum Limit offers used for SAC accreditation at the resource's GVTC value for two reasons: (1) to ensure a resource does not receive more capacity credit within a Season than it has demonstrated through seasonal correction of a GVTC test; and (2) to align the LOLE

[326] *Id.* at 39-40.

[327] *Id.* at 24.

[328] *Id.* at 46.

modeled capacity with the SAC values for purposes of the MISO-system wide UCAP/ISAC ratio. MISO states that, because GVTC is a basis for UCAP, if the SAC values were not capped the ratio would be skewed, further misaligning the capacity LOLE model and the Hourly Emergency Maximum Limits.[329]

185. In response to arguments that MISO's proposal unnecessarily restricts Winter capacity and that MISO should modify its interconnection provisions to reflect non-Summer Seasons, MISO notes that its existing GIP allows interconnection customers to request their desired interconnection service amount (in MW) within the Installed Generating Facility Capacity, which is the facility's maximum gross output. MISO states that as of today, higher Winter capacity amounts have already been requested by multiple interconnection customers. MISO argues that capacity restrictions may exist today under existing GIP and that it is appropriate and necessary for resource owners to initiate separate interconnection requests for additional interconnection service amounts. MISO contends that the proposal maintains the existing interconnection service amounts granted as is, and that the proposal provides additional incentives to encourage Interconnection Customers to request at higher seasonal capabilities with transitioning to the seasonal construct.[330]

186. MISO contends that it has supported the proposed provision to consider a resource unavailable for accreditation purposes when it is offline with a lead time that exceeds 24 hours. MISO states that a majority of capacity is either cleared or committed in the Day-Ahead Market and the first post Day-Ahead Reliability Assessment Commitment, and the 24-hour threshold assumes the resource could reasonably be economically committed if needed. MISO states that most MaxGen Events have been driven by events occurring after the Day-Ahead Market clears. MISO adds it intends to review the impact and appropriateness of this provision after sufficient time has passed after implementation to inform continued refinements should they be needed.[331]

187. MISO acknowledges that there is a "disconnect" between the LOLE model, which produces the seasonal requirements, and SAC accreditation. MISO states that it proposes a system-wide UCAP/ISAC ratio to address this "disconnect." MISO states that it will strive to produce SAC requirements directly from the LOLE model as it further develops

[329] *Id.* at 34.

[330] *Id.* at 38-39.

[331] *Id.* at 42-43 (citing Potomac Economics Comments at 10).

the LOLE model capabilities; however, MISO believes the proposed ratio is an appropriate solution that aligns the LOLE model requirements with accreditation.[332]

188. MISO states that its Tariff currently includes detail on how wind and non-intermittent resources are accredited, and that MISO is not proposing to make changes to those provisions. MISO contends that arguments raised by Midwest TDUs and others related to wind and non-intermittent resource accreditation should be addressed in any future filing involving those resources.[333]

189. MISO disagrees with arguments that it has failed to demonstrate the proposal to increase the minimum number of required allowed interruption calls for LMR DRs from 10 per Planning Year to 16 in order to receive 100% capacity accreditation is just and reasonable. MISO states it performed an analysis in early 2020 (2020 LOLE Analysis)—prior to the Commission-approved LMR filing in Docket No. ER20-1846-000—that showed on an annual basis that LMR DRs needed 15 calls to get 100% capacity accreditation.[334] MISO asserts that it used this analysis along with MaxGen Events in particular Seasons to distribute the number of annual calls across the four Seasons. MISO states that its proposal requires one additional call per Planning Year than the 2020 analysis indicated. MISO explains that under the proposed seasonal construct, all LMR DR resources have the option to participate in a respective Season's auction with no more than the five calls historically required for LMR qualification. MISO contends that, if an LMR DR cannot respond 16 times to qualify for all four Seasons in a Planning Year, it can offer in just those Seasons that correspond with its capabilities to participate.[335]

d. Answers to the MISO February 10 Answer

190. Alliant states that MISO's proposed seasonal accreditation methodology will inappropriately rely on limited data that includes anomalous values and/or fails to represent future resource performance.[336] Alliant expresses doubt that MISO's proposed SAC methodology will improve reliability in a cost-effective way or accurately reflect

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[332] *Id.* at 34-35.

[333] *Id.* at 48.

[334] *Id.* at 33 (citing RASC presentation (Feb. 5, 2020), https://cdn.misoenergy.org/20200205%20RASC%20Item%2005b%20RAN%20LMR%20Accreditation%20and%20LOLE%20modeling423730.pdf).

[335] *Id.*

[336] Alliant Answer at 5.

resource availability.[337] The Mississippi Commission argues that MISO fails to demonstrate or offer evidence that the SAC proposal will improve reliability.[338] The Mississippi Commission notes that MISO acknowledges that Zone 10 resource accreditation is expected to decrease under the proposal and contends that MISO has not provided analysis to demonstrate that these resources are less reliable than other resources, and that MISO is overlooking the contribution of these resources during February 2021 cold weather event.[339]

191. WEC Utilities support the seasonal resource adequacy construct but seeks additional transition time to adjust resource planning and operational strategies.[340] WEC Utilities note that the MISO proposed transition timeframe will not mitigate the impact on decisions that require a long lead time or have already been made, such as the decision to add new generation resources.[341] WEC Utilities note that it can take 18 months to obtain a GIA and additional years are needed to complete construction of new resources.[342] WEC Utilities state that there is no exemption for accreditation impacts on resources with inadequate weatherization or non-firm fuel supplies, the way there is an exemption for planned outages.[343] WEC Utilities assert that activities such as capacity resource planning, fuel procurement, backup fuel readiness, winterization, and staffing levels require additional time but will enhance resource availability during times of highest risk.[344] WEC Utilities state that additional stakeholder discussions and time for preparation are necessary before MISO's proposed SAC can be implemented.[345]

192. Alliant states that MISO's proposed timeline is not realistic from a cost or scheduling perspective, especially if it relies on the GIP process to address some

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[337] *Id.*

[338] Mississippi Commission Answer at 4.

[339] *Id.* at 5.

[340] WEC Utilities Answer at 4.

[341] *Id.*

[342] *Id.*

[343] *Id.*

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

[345] *Id.* at 5.

stakeholder concerns.[346] Alliant states that it is illogical for MISO to express concern with reliability in the footprint while capacity that is currently available is waiting to interconnect and access MISO markets.[347] Alliant argues that MISO's commitment to ignoring the practical realities of using existing processes to achieve overly aggressive short-term goals will result in resource owners purchasing high-cost, unnecessary capacity to meet overly conservative capacity need estimates.[348] Alliant requests that the Commission require MISO to delay the proposed implementation schedule.[349]

193. Entergy states that the MISO February 10 Answer does not alleviate concerns regarding MISO's implementation timeline. Entergy states that, while MISO may be correct that supply/demand balances will be maintained at the footprint level, the supply/demand balance at the Zonal level will change, and MISO does not provide an opportunity for LSEs to take actions to improve their supply/demand balance prior to the 2023/2024 Planning Year. Further, Entergy states that it agrees with MISO that the existing must-offer requirement for Capacity Resources means "their offered capacity should already generally align with their availability," but argues that these rules actually lend added support for rejecting MISO's availability-based SAC proposal because existing MISO rules already create such general alignment.[350]

194. Midwest TDUs argue that the MISO February 10 Answer fails to demonstrate that it is just and reasonable to determine seasonal accreditations by backfilling Tier 2 hours with Annual RA Hours (or AAOC) comprised of: (1) hours already included in Tier 2 for that Season; and (2) out-of-Season RA Hours.[351] Midwest TDUs state that in-Season RA Hours would factor into SAC twice and be weighted more heavily than other hours.[352] Midwest TDUs assert that MISO provides no evidence that availability during

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[346] Alliant Answer at 7.

[347] *Id.*

[348] *Id.*

[349] *Id.*

[350] Entergy Answer at 7 (citing MISO February 10 Answer at 7-8).

[351] Midwest TDUs Answer at 6-7.

[352] *Id.* at 6.

out-of-Season tight hours is a better measure of seasonal availability than other in-Season hours, and that such an assumption is inapposite to a shift to a seasonal construct.[353]

195. Entergy states that the MISO February 10 Answer confirms the underlying uncertainty and volatility of its SAC proposal and argues that the proposal will make prudent resource planning extremely difficult.[354] Entergy argues that the aggregate effects of the volatility in MISO's SAC proposal will be evident in LSE Reserve Requirement surplus and deficit positions and Local Clearing Requirement surplus and deficit positions, but ignore and overlook the effects on individual LSEs and resource owners.[355] Entergy argues that a planning paradigm that cannot reasonably be predicted defies any reasonable effort to conduct long-term planning consistent with such an objective.[356]

196. Entergy argues that MISO's statement that "[i]deally, MISO would be able to know exactly a resource's availability ahead of time but, without a crystal ball, historical data is the best indicator of future performance" highlights the underlying uncertainty or randomness of the SAC proposal.[357] Entergy further states that, like MISO, resource owners do not have a "crystal ball" or know when events requiring the greatest need will occur and Entergy argues that it is not reasonable for MISO to claim it is incentivizing resources to be available during times of greatest need when those times are unpredictable.[358] Entergy argues that the minimum number of RA Hours in MISO's proposal (i.e., 65 hours) does not address concerns about the volatility of resources accreditation or inherent unpredictability of events that lead to times of greatest need.[359]

197. Alliant states that MISO's proposal would allow for significant volatility in accredited capacity at a local level, even if there is not excessive accredited capacity

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[353] *Id.*

[354] Entergy Answer at 3.

[355] *Id.* at 3-4.

[356] *Id.* at 5.

[357] *Id*. at 5 (citing MISO February 10 Answer at 25).

[358] *Id.* at 4.

[359] *Id.* at 5.

volatility across the MISO footprint.[360] Alliant asserts that local capacity resource accredited capacity volatility will not enhance reliability.[361]

198. Midwest TDUs argue that MISO offers no defense of its proposed requirement that outages must be scheduled at least 120 days from the last planned outage to qualify for a Tier 2 Planned Outage Exemption.[362] Midwest TDUs argue that MISO provides no explanation for its proposal to ignore historical performance and cap accreditation based on a seasonally corrected GVTC test.[363] Midwest TDUs assert that MISO fails to explain the relationship between its LOLE model, proposed GVTC adjustment, and proposed UCAP/ISAC ratio.[364] Midwest TDUs state that MISO's proposal does not resolve the disconnects between the various components of its resource adequacy construct, but rather includes a "patchwork of ad hoc adjustments."[365] Midwest TDUs also argue that MISO has not shown that it is just and reasonable to provide zero accreditation for offline resources with lead times longer than 24 hours.[366] Midwest TDUs assert that MISO does not explain why it is appropriate for such longer lead time resources to bear the entire risk of anticipating RA Hours more than 24 hours in advance, as opposed to MISO, or why these longer lead time resources are in a better position than MISO to anticipate RA Hours.[367] Midwest TDUs claim that self-commitments based on limited information would likely lead to less efficient dispatch, resulting in higher costs for consumers without providing meaningful reliability benefits.[368] Midwest TDUs assert that MISO provides no justification for applying a UCAP/ISAC conversion ratio to Schedule 53

[360] Alliant Answer at 4.

[361] *Id.*

[362] Midwest TDUs Answer at 7-8.

[363] *Id.* at 8-9.

[364] *Id.* at 9.

[365] *Id.* at 10.

[366] *Id.* at 10-11.

[367] *Id.* at 11.

[368] *Id.*

Resources but not to other similarly situated resources, such as intermittent resources that are also accredited based on actual availability.[369]

199. Regarding MISO's proposal to increase the number of required allowed calls for LMR DRs from 10 per Planning Year to 16 per Planning Year to receive 100% capacity accreditation, Industrial Customers argue that the MISO February 10 Answer does not clarify or correct any misstatements identified in their protest and does not address their concerns including the problematic nature of MISO's reliance on its early 2020 analysis.[370] Industrial Customers argue that, in Docket No. ER20-1846-000, MISO used the 2020 LOLE Analysis to support increasing the minimum number of required interruption calls for LMR DRs from 5 to 10 per Planning Year to receive 100% capacity accreditation for a full Planning Year, and that MISO concluded that only 10 required calls per Planning Year were needed. Industrial Customers argue that MISO has not produced a new analysis that shows different results and has not justified its reinterpretation of the 2020 LOLE Analysis to now support requiring LMR DRs to provide up to 16 interruption calls per Planning Year for 100% capacity accreditation for a full Planning Year rather than up to 10 calls per Planning Year.[371]

200. Industrial Customers contend that MISO has not demonstrated that past MaxGen Events support its proposal to require up to 16 interruption calls per Planning Year from LMR DRs in order for them to receive a 100% capacity accreditation for a full Planning Year.[372] Regarding MISO's assertion that that LMRs who cannot meet its proposed 16 interruption calls per Planning Year can still participate and receive 100% capacity accreditation for a single Season, Industrial Customers reiterate that unnecessarily decreasing the ability of end-use customers to participate as an LMR DRs for a full Planning Year and increasing their cost of such participation would unnecessarily harm the end-use customers that are participating as LMRs and unnecessarily decrease the total supply of capacity in the MISO footprint (through a reduction in full Planning Year LMR participation). Industrial Customers claim these impacts would unnecessarily increase the capacity costs of all end-use customers in the MISO footprint.[373]

201. Midwest TDUs argue that MISO inappropriately defers matters to the Market Monitor and BPMs that should otherwise be included in MISO's Tariff because they

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[369] *Id.* at 11-12.

[370] Industrial Customers Answer at 3-4.

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

[372] *Id.* at 5.

[373] *Id.*

significantly affect rates, terms, and conditions of service.[374] Midwest TDUs assert that the following matters should be included in MISO's Tariff: (1) determination of whether an outage could have been reasonably anticipated; (2) Tier 1 Planned Outage Exemptions; (3) accreditation of non-Schedule 53 Resources.[375]

e. Deficiency Letter Response

202. As noted above, on March 9, 2022, Commission staff issued a deficiency letter and requested additional information, and MISO submitted its Deficiency Letter Response on April 8, 2022. In response to a question requesting quantitative evidence demonstrating the extent to which historical resource performance as reflected in the proposed SAC accreditation is more indicative of future resource performance than the current UCAP method, MISO reiterates that the current UCAP method only accounts for forced outages and derates deemed not outside management control. MISO explains that, by design, UCAP ignores many factors that impact resource availability resulting in significant overstatement of resource availability. MISO adds that the UCAP method does not differentiate between periods of high risk and low risk, resulting in overstating resource availability during emergency periods, especially when those risks occur outside of Summer. MISO submits that, by contrast, the SAC methodology emphasizes resource availability during times in need and accounts for factors described above that UCAP ignores.[376]

203. MISO argues its analysis demonstrates that the proposed SAC methodology is more indicative of future resource performance during emergency periods than the current UCAP methodology. MISO provides a table comparing actual resource offers to how that resource is accredited using UCAP, ISAC, and AAOC in two scenarios: (1) MISO North, Summer; and (2) MISO South, Winter. The table indicates that in MISO North, Summer, resources offered 73,280 MW during MaxGen Events. MISO's UCAP accreditation for that same period was 79,062 MW (a 7.8% deviation), and its ISAC accreditation was 73,885 (a 0.8% deviation). In MISO South, Winter, resources offered 30,588 MW during MaxGen Events. MISO's UCAP accreditation for that same period was 37,322 (a 22% deviation), and its ISAC accreditation was 30,223 MW (a -1.2% deviation).[377] MISO explains that MISO and the Market Monitor believe that ISAC is the most relevant basis for comparison to UCAP because ISAC is directly calculated

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[374] Midwest TDUs February 25 Answer at 28-29.

[375] *Id.* at 29-30.

[376] MISO Deficiency Letter Response at 7.

[377] *Id.* at 5.

based on Real-Time offers and is highly correlated with historical and future resource performance during emergency periods.[378]

204. MISO states that its analysis indicates most Seasons reach 65 RA Hours based on the four years of historical data MISO examined, with only 2 of the 32 Seasons MISO evaluated falling significantly short of the 65-hour target. MISO state that, as a result, a resource's Schedule 53 SAC calculation for any specific Season was based primarily on the performance of a resource during the relevant Season.[379]

205. MISO states that it is theoretically possible for a resource's SAC to be calculated primarily based on its performance in other Seasons, but this would only happen if there were a large amount of RA Hour exemptions applicable to a specific resource. MISO states that, for example, a resource could miss the vast majority of RA Hours for a Season year after year due to lengthy planned outage exemptions. MISO states that, for the majority of SAC to be based on performance outside the Season a resource would have to average more than 40 exempt RA Hours in each Season. MISO states that simply missing 50% of RA Hours in a Season is not enough to make other Seasons more important to a resource's SAC accreditation because Tier 1 is weighted at only 20%.[380]

206. MISO submits that, when the full 65 RA Hours per Season does not exist for a resource, the AAOC is a reasonable proxy because it reflects the typical availability for the resource during times of need. MISO provides a table demonstrating that in MISO North, Summer, accrediting the MISO fleet with AAOC resulted in a -4.7% deviation from offers during MaxGen Events, while in MISO South Winter, AAOC accreditation resulted in a 0.5% deviation from actual offers.[381]

207. MISO contends that the AAOC was specifically developed to address small sample sizes of RA Hours in a given Season so that Tier 2 accreditation would not be based on a limited set of hours, which could under or overstate a resource's capacity value. MISO states that without AAOC to use as an indicative measure of a resource's availability during high-risk periods, a resource might have a limited sample of non-

[378] *Id.* at 7-8.

[379] *Id.* at 4.

[380] *Id.* at 5.

[381] *Id.*

exempt RA Hours over a three-year lookback period making its accreditation highly volatile.[382]

208. In response to a question regarding the UCAP/ISAC ratio, MISO states that the ratio has two primary benefits. First, MISO states that use of the UCAP/ISAC ratio prevents the need to convert Reserve Requirements and Local Clearing Requirements into SAC terms. Second, MISO states that the ratio eliminates the possibility that the Auction Clearing Price would need to be increased in order to offset the lower volume and to maintain the overall supply and demand balance. In addition, MISO asserts that the UCAP accreditation method overstates resource availability because it only considers forced outages when accounting for availability. Further, MISO submits that it is exploring whether the LOLE study can use SAC instead of UCAP, but explains that industry tools and modeling practices would have to be modified and then tested to ensure they accurately measure LOLE risk.[383]

209. With regard to proposed outage exemptions for the SAC, MISO states that the requirement that an exempt outage be 120 days or more since the end of a previous planned outage is designed to disincentivize frequent outages, which could reduce the Maintenance Margin available to other resources.[384] MISO clarifies that it does not intend for planned outage exemption provisions to apply to planned and unplanned partial generator outages, also known as derates. MISO states that exemptions for derates could be considered in a future enhancement as the current outage coordination processes do not evaluate derates, which are typically submitted with no or little advanced warning.[385]

210. In response to a question about why MISO is not proposing to accredit certain resources that are currently accredited based on availability as Schedule 53 Resources, MISO states that MISO has a long-standing history of different accreditation methods for different resource types, which the Commission has accepted as just and reasonable. MISO states that its ultimate goal is to align accreditation for all resources with the resource's availability during times of need. MISO states that, while accreditation methods are different across resource types, they are comparable and relevant to the characteristics of those resource types. MISO states that, as an example, wind resources will continue to be accredited based on seasonal ELCC with capacity credits allocated based on each wind resource's performance over eight peak demand hours per Season,

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[382] *Id.*

[383] *Id.* at 9.

[384] *Id.* at 13.

[385] *Id.* at 10.

and solar resources will be accredited based on historical availability during specific hours representing typical seasonal peak demand hours.[386]

211. MISO states that it recognizes the need to further align the proposed accreditation methodology for Schedule 53 Resources and the existing accreditation for non-Schedule 53 Resources, but submits that its proposal closes the gap that currently exists as it better aligns the resource accreditation for all resource types than under the current UCAP approach. MISO adds that wind and solar have different offer requirements and are not as easily incentivized to be available during times of need as compared to Schedule 53 Resources.[387]

212. In response to a question regarding the proposed increase of required calls for LMR DRs from 10 in a year to 16, MISO reiterates that its 2020 LOLE analysis demonstrates that LMR DRs needed 15 calls on an annual basis to receive 100% accreditation for the Planning Year. MISO explains that, with the proposed changes to a seasonal construct, MISO used this analysis, together with an analysis of past MaxGen Events, to distribute the number of annual calls across the four Seasons. MISO states that continuing to only require 10 interruption calls in a Planning Year would be over-stating LMR DR availability at times of system need.[388]

f. Responses to Deficiency Letter Response

213. Some commenters addressed the evidence MISO provided to support the proposed SAC accreditation method. Potomac Economic states that it finds MISO's data regarding SAC accreditation and expected performance to be compelling, and adds that SAC will be more accurate because it comprehensively addresses all reasons for resource availability compared to MISO's current UCAP accreditation, which only reflects forced outage rates. Potomac Economics states that, because UCAP accreditation only considers outages reported in GADS, it is not possible for UCAP accreditation to predict availability during emergencies.[389]

214. Alliant raises concerns that MISO's Deficiency Letter Response indicates that the piecemeal approach MISO proposes has the potential for costly and option-limiting consequences. Alliant reiterates its request for the Commission to require further

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[386] *Id.* at 15-16.

[387] *Id.* at 16.

[388] *Id.* at 17-19.

[389] Potomac Economics Response to MISO Deficiency Letter Response at 4-5.

stakeholder process before implementing a seasonal resource adequacy construct.[390] Clean Energy Coalition argues that MISO's response to the Deficiency Letter's request to provide further quantitative evidence that SAC is a better indicator of expected future resource availability than UCAP is insufficient because MISO provides only aggregated data for two Seasons.[391] Minnesota Power argues that MISO did not provide quantitative evidence of SAC accreditation being more indicative of future performance in emergency periods than UCAP.[392]

215. The Mississippi Commission argues that MISO's Deficiency Letter Response fails to provide quantitative evidence demonstrating the extent to which historical performance as reflected in SAC accreditation is more indicative of future performance in emergency periods than the UCAP methodology. The Mississippi Commission suggests that MISO's rationale presupposes that a resource owner can predict when an emergency will occur, and that the occurrence of historical emergencies accurately reflects the occurrence of future emergencies. The Mississippi Commission argues that neither of these assumptions are true.[393] Further, the Mississippi Commission argues that the table MISO provided, which is based on 6 days in the Summer and 5 days in the Winter of 2021, is not sufficient evidence to support MISO's conclusion.

216. Midwest TDUs argue that MISO fails to provide quantitative evidence supporting final SAC values because MISO instead compares its existing UCAP methodology to ISAC, rather than final SAC values. Midwest TDUs also argue that MISO provides only data from a single Season in MISO North and MISO South, which, according to Midwest TDUs, is too small of a sample size to evaluate MISO's proposed methodology.[394]

217. Entergy states that MISO's response as to whether historical performance using the SAC accreditation methodology is more indicative of future performance than the existing UCAP accreditation is flawed. First, Entergy states that MISO's answer is not responsive to the Deficiency Letter because MISO provides ISAC values rather than SAC values. Second, Entergy states that MISO only provides analysis on one emergency period for MISO North and South, which, according to Entergy, is too small of a sample size to draw meaningful conclusions from. Third, Entergy contends that examining region-wide aggregated accreditation values does not provide insight into the ability of an

[390] Alliant Response to MISO Deficiency Letter Response at 6.

[391] Clean Energy Coalition Response to MISO Deficiency Letter Response at 5-6.

[392] Minnesota Power Response to MISO Deficiency Letter Response at 2.

[393] Mississippi Commission Response to MISO Deficiency Letter Response at 4.

[394] Midwest TDUs Response to MISO Deficiency Letter Response at 3-4.

accreditation methodology to predict the availability of individual units, and it would be much more insightful to investigate the correlation between the accreditation ratings of individual resources and those resources' availability during emergency periods. Entergy submits that this analysis would demonstrate whether units with higher SAC accreditation relative to their GVTC are more likely to be available during emergency periods than units with lower SAC ratings. Entergy contends that MISO's analysis provides no evidence as to whether SAC is a better predictor of a unit's availability during MaxGen hours than UCAP or any other alternative accreditation methodology. Entergy states that, for example, it is possible that a significant number of units with high SAC ratings were unavailable during the 2021 MaxGen emergency hours studied by MISO, which would undermine the predictive performance of SAC. Entergy states that MISO's analysis did not look at individual unit performance during the 2021 MaxGen hours so there is not enough information to properly judge SAC's or UCAP's ability to predict future performance during emergency periods.[395]

218. Several commenters discussed MISO's proposed use of AAOC in SAC accreditation. Potomac Economics agrees with MISO that AAOC is a reasonable approach in cases where RA Hours are deficient in a given Season. Potomac Economics submits that using data from other Seasons' RA Hours is preferable to using performance data during the same Seasons from non-RA Hours because RA Hours are not known in advance so resources that perform well must either be running in most hours or have the flexibility to be available on short notice. Potomac Economics argues that, because historical data from Non-RA Hours do not capture resource responsiveness to short-notice RA Hour events, it would be inferior to MISO's proposal.[396]

219. Minnesota Power argues that MISO failed to address the question raised in the Deficiency Letter regarding the inclusion of RA Hours from another Season being used to meet the 65-hour RA Hour target.[397] Similarly, the Mississippi Commission contends that MISO's Deficiency Letter Response fails to justify using data from other Seasons to supplement deficient RA Hours in a particular Season. The Mississippi Commission submits that, instead, MISO states it is unlikely that there will be fewer than 65 RA Hours in any given Season.[398]

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[395] Entergy Response to MISO Deficiency Letter Response at 3-4.

[396] Potomac Economics Response to MISO Deficiency Letter Response at 5.

[397] Minnesota Power Response to MISO Deficiency Letter Response at 2.

[398] The Mississippi Commission Response to MISO Deficiency Letter Response at 3.

220. Midwest TDUs argue MISO has not demonstrated that the AAOC method is just and reasonable because MISO's support for use of AAOC relies on too small of a sample size and MISO does not evaluate all Seasons.[399] Midwest TDUs argue that MISO compares AAOC to offers during emergency hours during Summer 2021, but because Summer 2021 would have met the 65 RA Hour target, there would have been no need to use AAOC in that situation. Midwest TDUs argue that, in contrast, the AAOC is most relevant in non-Summer Seasons, but MISO has not provided evidence demonstrating how well AAOC approximates performance during times of need during non-Summer Seasons.[400]

221. Clean Energy Coalition contends that using performance data from other Seasons for accreditation of a thermal resource in a given Season does not fulfill the objectives of the filing, which is to identify times of risk and credit resources to the extent they mitigate that risk. Clean Energy Coalition states that a resource's typical availability during times of need in other Seasons does not always correlate with availability during the Season for which it is being accredited.[401] Clean Energy Coalition states that, while on a system-wide basis, using performance hours from other Seasons may give similar results, this may not be true on an individual resource basis, violating the principle that generators must be compensated based on their actual contribution to resource adequacy and thus to reliability during the specific Season they are accredited.[402] Clean Energy Coalition argues that for the Winter Season, many generators would see higher accreditation using the AAOC methodology than they would if only RA hours from prior Winter Seasons were used. Clean Energy Coalition states that, conversely, wind generation tends to be higher in the Winter, and if a similar accreditation approach for wind generation is used in the future, wind accreditation for the Winter would likely be lower than wind's actual Winter capacity availability.[403]

222. Many commenters discussed MISO's proposed use of the UCAP/ISAC ratio to calculate final SAC accreditation values. Potomac Economics states that the foundation of MISO's availability-based accreditation is that it should not fundamentally alter the supply and demand balance in the capacity market. Potomac Economics explains that since the planning model calculates Planning Resource needs in UCAP terms and resources are accredited in SAC terms, a ratio must be used to adjust the demand for

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[399] Midwest TDUs Response to MISO Deficiency Letter at 5.

[400] *Id.* at 6.

[401] Clean Energy Coalition Response to MISO Deficiency Letter Response at 3.

[402] *Id.* at 4.

[403] *Id.*

planning resources into SAC terms or the capacity supply values back into UCAP terms. Potomac Economics states that the proposed UCAP/ISAC ratio is superior to alternative approaches because of its relative effects on Schedule 53 and non-Schedule 53 Resources. Potomac Economics states that, if MISO were to adjust the UCAP demand downward into SAC terms, this would effectively increase the quantity of demand that can be served by every accredited MW of capacity. Potomac Economics contends that this would not be appropriate for non-Schedule 53 Resources because the proposal does not modify the accreditation of these resources. Potomac Economics states that this would result in a relative increase in accredited capacity for non-Schedule 53 Resources and provide for an "unjustified windfall" benefit at the expense of Schedule 53 Resources.[404]

223. Potomac Economics adds that the UCAP/ISAC ratio is needed to maintain the available accredited capacity consistent with MISO's LOLE planning process. Potomac Economics states that, although the planning study produces resource adequacy requirements in UCAP terms, it considers most of the factors that affect unit availability, not just forced outages. Potomac Economics states that, for example, if planned outages were to increase substantially over historic levels, the resource adequacy requirements (expressed in UCAP) would rise correspondingly. Potomac Economic submits that it is therefore necessary to resolve the difference between the UCAP-based demand for Planning Resource capacity and availability-based accreditation under SAC in order for the capacity market to achieve its objectives.[405]

224. Potomac Economics states that, with some changes, the LOLE planning models could produce requirements in SAC terms. Potomac Economics cautions, however, that it is important to recognize the model would not be assuming the SAC values for each resource in its modeling because many of the factors that affect the availability of resources are random factors that must be modeled in the planning model through a Monte Carlo process that produces thousands of random draws. Potomac Economic states that the result of this process indicates the amount of capacity that is needed (or demanded), which can be denominated in ICAP, UCAP or SAC. Potomac Economics concludes that, while transitioning the LOLE model to produce requirements in SAC terms could have some value, it is not essential to implement MISO's proposal.[406]

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[404] Potomac Economics Response to MISO Deficiency Letter Response at 2-3.

[405] *Id.* at 3.

[406] *Id.* at 4.

225. Minnesota Power argues that MISO did not provide any technical basis for the proposed UCAP/ISAC ratio.[407] Midwest TDUs argue that MISO continues to provide a reasonable explanation for its proposal to scale up Schedule 53 Resource accreditation but not non-Schedule 53 Resources. Midwest TDUs contend that MISO's explanation that accrediting non-Schedule 53 Resources based on UCAP overstates a resource's availability because it only considers forced outages does not describe the accreditation of all non-Schedule 53 Resources. Midwest TDUs explain that certain resources, such as wind and solar, are currently accredited based on their historical availability during times of need. Midwest TDUs argue that MISO has failed to explain why it is just and reasonable to apply a UCAP/ISAC conversion ratio to some resources, but not others.[408]

226. Entergy states that MISO's Deficiency Letter Response fails to explain how Local Clearing Requirements are impacted by the two options provided by the Market Monitor. Entergy states that in the first option, the MISO-wide Reserve Requirement was scaled by the UCAP/ISAC ratio and zonal Local Clearing Requirements were scaled by the zonal UCAP/ISAC ratio. Entergy states that as a result, MISO-wide supply/demand balance was maintained and each Zone's Summer Local Clearing Requirement supply/demand balance was also maintained. Entergy states that the Market Monitor's second proposal scales up SAC accreditation of thermal resources such that only the MISO-wide supply/demand balance is maintained and the zonal Local Clearing Requirement supply/demand balance is altered. Entergy states that MISO has not explained why it took the inconsistent approach of designing a proposal that maintains the MISO-wide supply/demand balance but does not maintain the zonal Local clearing Requirement supply/demand balance. Entergy states that the result of this decision means that some zones' Local Clearing Requirement supply/demand balance will be improved and other zones' Local Clearing Requirement supply/demand balance will be worsened. Entergy argues that given the importance of Local Clearing Requirement in determining zonal Auction Clearing Prices, it is unjust and unreasonable for MISO to drastically change the Local Clearing Requirement supply/demand balance of a zone due to a change in accreditation methodology without providing adequate time for market participants in the zone to procure additional capacity to restore the prior Local Clearing Requirement supply/demand balance.[409]

227. Commenters also raised concerns about MISO's proposed exclusion process for planned outages. Duke Energy asserts that MISO's Deficiency Letter Response demonstrates that more clarification is necessary and submits that MISO's justification

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[407] Minnesota Power Response to MISO Deficiency Letter Response at 3.

[408] Midwest TDUs Response to MISO Deficiency Letter Response at 13-14.

[409] Entergy Response to MISO Deficiency Letter Response at 1-2.

for the exclusion of planned derates from outage exemptions fails to acknowledge other sources of reliable information on planned derates that could be used until MISO develops further system enhancements. Duke Energy suggests that MISO could use planned derate information submitted in GADS. Duke Energy states that the Commission should require MISO to commit to a timeline to file changes that would apply the Schedule 53 Resource planned outage exemptions to derates, as well.[410]

228. Midwest TDUs argue that MISO has not justified its proposal to disqualify derates from planned outage exemptions outside of the fact that its current outage provisions do not evaluate for derates. Midwest TDUs argue that MISO should be required to explain why it is just and reasonable to disqualify all planned outage derates from Schedule 53 planned outage exemptions.[411]

229. The Mississippi Commission argues that MISO fails to explain why a 120-day gap between planned outages to receive Tier 2 exemptions is an appropriate duration. The Mississippi Commission argues that MISO provides no evidence of prior excessive outages.[412]

230. Consumers Energy argues that planned derates should be eligible for the same exemptions as full scheduled outages. Consumers Energy contends that penalizing planned derates but not planned outages creates incentives for generator operators to fully shut down resources that could be partially operating and producing needed energy to ensure they receive a full Tier 2 exemption. Consumers Energy contends that this is a suboptimal outcome for all parties, hurting grid reliability, raising energy prices, and weakening generator economics.[413]

231. Midwest TDUs argue that MISO's attempt to justify its Tier 2 Planned Outage exemption requirements are largely unresponsive, as MISO does not explain why a requirement for 120 days between outages would increase Maintenance Margin availability for other resources. Midwest TDUs suggest that this requirement creates incentives for resources to schedule longer outages, thereby decreasing Maintenance Margin for others, because one 30-day outage could qualify for a Tier 2 exemption but

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[410] Duke Energy Response to MISO Deficiency Letter Response at 2-3.

[411] Midwest TDUs Response to MISO Deficiency Letter Response at 12-13.

[412] The Mississippi Commission Response to MISO Deficiency Letter Response at 6-7.

[413] Consumers Energy Response to MISO Deficiency Letter Response at 2-3.

two 10-day outages could not.[414] Consumers Energy argues that MISO does not provide enough support for the required 120-day notice requirement for planned outages to receive a Tier 2 exemption. Consumers Energy asserts that MISO does not explain why this amount of lead time is necessary, how or why this amount of notice will be superior to the existing two-week requirement, or what risk assessments will be available that currently are not.[415]

232. Entergy argues MISO failed to answer why Tier 2 exemptions are not granted in the event that the Maintenance Margin is above zero. Entergy states that MISO's response fails to recognize that the use of Maintenance Margin already assists generation owners in coordinating planned outages, making MISO's proposed 120-day coordination period excessive and unnecessary. Entergy states that, when an outage is scheduled during a time with a positive Maintenance Margin, MISO should not need to conduct extensive coordination processes or risk assessments.[416]

233. Industrial Customers argues that MISO's Deficiency Letter Response does not provide any additional support to increase the minimum amount of allowed calls for LMR DRs to receive 100% capacity accreditation in a Planning Year. Industrial Customers states that, in particular, MISO does not address the problematic nature of relying on the 2020 LOLE analysis as the basis for requiring 16 interruptions per Planning Year.[417] Industrial Customers state that MISO's 2020 LOLE Analysis showed that 10 calls per Planning Year would provide 97.4% capacity accreditation, while requiring an additional call would only increase capacity accreditation by an additional 2.6%. Industrial Customers reiterate that MaxGen Events have never exceeded eight total in any given Planning Year, and MISO has historically never called any LMR more than three times in a Planning Year.[418] Industrial Customers argue that MISO's response demonstrates that its proposal does not provide prorated capacity credit for LMR DRs, even though MISO's analysis indicates support for 97.4% accreditation for LMR DRs that make themselves available for 10 calls in a Planning Year.[419]

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[414] Midwest TDUs Response to MISO Deficiency Letter Response at 11.

[415] Consumers Energy Response to MISO Deficiency Letter Response at 2-3.

[416] Entergy Response to MISO Deficiency Letter Response at 5.

[417] Industrial Customers Response to MISO Deficiency Letter Response at 7.

[418] *Id.* at 8-9.

[419] *Id.* at 9-10.

234. Clean Energy Coalition argues that MISO fails to adequately explain why it is inappropriate to include other resources that are currently accredited based on availability as Schedule 53 Resources. Clean Energy Coalition argues that MISO must "demonstrate that the two accreditation methodologies work together and assess capacity availability during the same risk hours in order for the construct to hold together both theoretically and practically to ensure a reliable system that can meet load during these high-risk hours."[420]

235. Clean Energy Coalition argues that accreditation should be consistent across all resource types, so as to not discriminate between different technologies. Clean Energy Coalition submits that several principles should be applied to avoid discrimination: (1) capacity accreditation for all resource types should be performed using the same methodology, including assessment during the same set of high-risk hours; (2) accreditation approach should be consistent so that a resource that mitigates more risk should receive a higher accreditation, and two resources that mitigate the same level of risk should receive the same accreditation; and (3) accreditation of each resource should be the same, regardless of the order in which resources' accreditation is calculated and accounted for. Clean Energy Coalition argues that MISO's proposal fails to meet these principles.[421]

236. Clean Energy Coalition states that it recognizes that the Commission recently approved PJM's capacity accreditation approach, which uses different accreditation methodologies for thermal and intermittent resources. Clean Energy Coalition states, however, that PJM recognizes in its filing that it would need to revisit its approach when its energy mix transition includes more intermittent resources. Clean Energy Coalition states that MISO's energy mix includes approximately 22% wind resources, with approximately 153 gigawatts of mostly solar and wind in its interconnection queue. Clean Energy Coalition believes that MISO should use a comparable accreditation approach for all resources now, rather than later.[422]

237. The Mississippi Commission argues that MISO's response does not justify treating External Resources differently from MISO internal resources, nor does MISO's response justify the exclusion of Stored Energy Resources – Type II from Schedule 53 Resource

[420] Clean Energy Coalition Response to MISO Deficiency Letter Response at 6.

[421] *Id.* at 7.

[422] *Id.* (citing *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,056, at P 67 (2021) (*PJM Interconnection*)).

accreditation.[423] The Mississippi Commission further argues that MISO does not explain why it proposes a 24-hour-or-less lead time requirement for Tier 2 accreditation. The Mississippi Commission asserts that MISO has not tied the requirement to modeling results, a contingency analysis, or operating parameters.[424]

g. MISO May 20 Answer

238. MISO states that its Deficiency Letter Response addresses the substance of the Commission's questions regarding the proposed 120-day requirement and application to Tier 2 exemptions. MISO states that the 120-day language in regard to granting a Generator Planned Outage exemption is included in MISO's Commission-approved Tariff. MISO states that the filed proposal resulted from a collaborative stakeholder process that sought to balance accurate capacity accreditation with proper incentives for prudent outage planning. MISO contends that, contrary to protestors' assertions, MISO provided support to establish that the proposal is just, reasonable, and non-discriminatory. MISO notes, for example, its Deficiency Letter Response explains that the proposal to require 120 days' notice of a planned outage in order to receive a Tier 2 exemption is designed to provide MISO the information needed prior to the start of a Season in order to identify and mitigate potential reliability issues.[425]

239. MISO states that it sufficiently explained the rationale for not including derates in the Schedule 53 Tier 2 exemption process by noting that its current outage processes do not evaluate planned derates, which are typically submitted with little to no advance notice.[426] MISO notes that over the last two years only 2.2% of derates were submitted with advanced notice of at least 14 days, which is the minimum amount of time needed to secure an exemption under MISO's proposal.[427]

240. MISO states that its Deficiency Letter Response provided a table showing that SAC is a better predictor of future offers than UCAP, which Potomac Economics found compelling. MISO states that it has demonstrated that its SAC methodology for Schedule 53 Resources would reasonably measure future availability during times of need in each

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[423] The Mississippi Commission Response to MISO Deficiency Letter Response at 2.

[424] *Id.* at 2-3.

[425] MISO May 20 Answer at 6 (citing Deficiency Letter Response at 13).

[426] *Id.* at 8 (citing Deficiency Letter Response at 12).

[427] *Id.* at 8-9.

Season and create powerful new incentives to offer as much availability as possible when MISO declares a MaxGen or when operating margin forecasts suggest tight conditions.[428]

h. Midwest TDUs June 6 Answer

241. Midwest TDUs dispute MISO's claim in its May 20 Answer that MISO has adequately responded to the Commission's request for quantitative evidence. Midwest TDUs argue that MISO does not, and cannot, explain how providing data from only a single Season in MISO North and a single Season in MISO South demonstrates how its SAC proposal is indicative of availability in all Seasons. Midwest TDUs assert that MISO's own emphasis on recent emergency events in other Seasons highlights the inability of this limited data to provide any basis for a Commission determination that MISO's proposed accreditation methodology is indicative of future performance during emergency periods in all seasons.[429]

242. Midwest further TDUs argue that the MISO May 20 Answer glosses over protestors' concerns regarding MISO's treatment of planned outage exemptions under Schedule 53. Midwest TDUs contends that MISO has not justified why planned derates that meet MISO's advanced notice requirements should be foreclosed from qualifying for exemptions.[430]

i. Commission Determination

243. We find MISO's proposed SAC accreditation is a just, reasonable, and not unduly discriminatory or preferential method for accrediting the capacity of Schedule 53 Resources because it will assign resources a capacity value based on their historical performance during high-risk hours in each Season. We find this approach is a reasonable basis to estimate a resource's expected availability during future times of need in a Season, which, in turn, is a reasonable basis to accredit the capacity of Schedule 53 Resources. MISO's SAC proposal provides resource owners with strong incentives to maximize resource availability during high-risk hours, which in turn will increase MISO operator confidence that those resources will perform when they are most needed.

244. We disagree that MISO's accreditation proposal is overly burdensome or complicated for resource owners. MISO's proposed SAC accreditation provides market participants with the specific calculations to determine how their resources will be valued under the new proposal. We also disagree that the SAC calculation process is overly

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[428] *Id.* at 10-11.

[429] Midwest TDUs June 6 Answer at 3.

[430] *Id.* at 3-4.

data-intensive or time-consuming. If MISO can calculate SAC values for all Schedule 53 Resources in its footprint and provide those values to resource owners within the timeframe provided for in MISO's Tariff, we believe that replicating and estimating or confirming those calculations will not be overly burdensome for individual resource owners.

245. We disagree with the Mississippi Commission that MISO has not supported the application of the SAC proposal to MISO South. We find that MISO has sufficiently demonstrated that its SAC proposal is just and reasonable and will result in several improvements to capacity accreditation in MISO, such as increased confidence in generator availability during high-risk hours, better coordination of resource outages, and stronger incentives for resources to be available in times of need. Collectively, these outcomes should provide benefits to MISO's entire system, not just a particular MISO region.[431] Further, as illustrated by 2021 Winter Storm Uri, MISO South can face capacity challenges for which additional accuracy in resource accreditation and incentives for resources throughout MISO to maximize their availability during peak periods would be beneficial.

246. We disagree with protestors' arguments that the SAC methodology will not predict the availability of Planning Resources during times of MISO's highest need. As an initial matter, the SAC methodology aligns a Schedule 53 Resource's reliability value with its historical availability at times of system needs throughout the Planning Year. While no capacity accreditation methodology can perfectly predict a resource's future availability or performance during all intervals, we find that MISO has demonstrated that the SAC methodology resource offers will reasonably predict resource availability in future Seasons.[432] We also disagree with claims that the SAC accreditation unduly increases volatility or otherwise is based on random data. We find that, by considering additional factors, including derates and planned outages that are not scheduled well in advance, the SAC methodology improves the accuracy of capacity accreditation by considering unit performance in times where the unit is most needed. We find that the resulting improved accuracy and alignment of performance incentives of the SAC value outweigh increased volatility.

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[431] *See., e.g.*, MISO February 10 Answer at 22 ("The more available resources become during these [high-risk] periods, the more future capacity credit they will receive. Aligning accreditation incentives with real time system needs will enhance operators' confidence in the availability of resources, further improving reliability.").

[432] *See* MISO Deficiency Letter Response at 7-8 (demonstrating that the ISAC accreditation was significantly more accurate in predicting MISO's fleet-wide offers during MaxGen hours in the Summer in North/Central and the Winter in MISO South).

247. While we find that MISO has supported its proposed SAC accreditation method, additional information regarding SAC's accuracy after the MISO's proposal is fully implemented would benefit the Commission and the public. Accordingly, we direct MISO to submit an informational report covering the first three Planning Years SAC accreditation is implemented. Specifically, we require MISO to, within 90 days of the conclusion of the 2025/2026 Planning Year, submit an informational report that compares the results of SAC accreditation to actual resource availability. The report should include data providing the SAC accreditation, resource availability, and UCAP accreditation (as a point of reference) for all RA Hours in all Seasons for the 2023/2024, 2024/2025, and 2025/2026 Planning Years. The data report should include the requested data (1) by Season, both in aggregate and for each sub-region; (2) by Season and by resource type (e.g., combined cycle, combustion turbine, coal units, and LMRs); and (3) for individual resources (specifically the weighted average percent variance for individual resources across the Planning Year).[433]

248. We disagree that MISO's proposed implementation timeline is unjust and unreasonable. MISO filed its proposal 16 months ahead of the 2023/2024 Auction, after several years of stakeholder discussion. Further, MISO's proposal includes a three-year transition process that gradually increases the accreditation weight of RA Hours each Planning Year. Further, the three-year rolling average used to calculate ISAC values reduces the extent to which resource availability in any one Season will impact a resource's capacity value, and over time the SAC will update to reflect resource performance under the new capacity accreditation methodology. Finally, MISO's proposal to treat resources that are scheduled to go on outage prior to September 1, 2022, the effective date of this proposal, as fully exempt from both Tier 1 and Tier 2 Hours will assist in the transition to a new accreditation framework, as the largest operational decision that resource owners will likely face as a result of this proposal is whether, and how, to adjust their planned outage schedules going forward. In response to arguments suggesting that MISO has not provided resource owners with sufficient time to account for a performance-based capacity accreditation, we agree with MISO that Capacity Resources are currently subject to a must-offer obligation under the current resource adequacy requirements and, therefore, resources should already have an expectation that they should be available and offering into MISO's energy markets. The transition period appropriately balances the need to implement the SAC methodology with the recognition that resource owners and LSEs may need to adjust their operations—including outage timing—and their contractual arrangements to maximize their potential SAC values. Accordingly, we disagree with COMPP that the transition period unduly delays needed reforms. For the same reasons, we are unpersuaded by arguments that MISO's

[433] This informational filing will not be noticed for comment or require Commission action.

accreditation will unduly harm resource owners because of their past operational decisions.

249. We disagree that the Commission's acceptance of longer transition mechanisms in PJM binds the Commission to reject a shorter timeframe in the instant filing. In the order accepting PJM's proposed Reliability Pricing Model, the Commission accepted PJM's proposed transition timeline because it "allows the participants in the market a period of time to understand and get used to the dynamics of the new capacity market prior to its full implementation."[434] We are not persuaded that market participants require the same transition period for MISO's proposal to *modify* its existing capacity market as PJM's proposal to *create* a capacity market.[435] In the PJM Capacity Performance Order, the Commission noted that the proposed five year transition period would: (1) allow resources to make gradual improvements and reduce the burden such improvements may impose; and (2) mitigate the potential for short-term shortage that might result from an immediate requirement of 100% Capacity Performance Resources.[436] We agree with MISO that, because the three-year lookback period will be based on operational experience from after MISO's RAN Phase 1's implementation, resources already have an expectation of needing to be available and therefore, it is reasonable for resources to have a shorter transition period.

250. However, with respect to Great River Energy's request for clarification that planned outages scheduled to begin before September 1, 2022 will be granted both a Tier 1 and Tier 2 exemption, we agree that additional clarification is required. The McFarlane Testimony states that such planned outages will be treated as fully exempt for Tier 1 and Tier 2 for accreditation purposes. However, MISO's proposed Tariff language states that "Generator Planned Outages scheduled to begin before September 1, 2022, will be granted a Tier 2 exemption."[437] While section II.B of proposed Schedule 53 notes that resource owners receiving a Tier 2 exemption will receive a Tier 1 exemption as well, it appears that this only applies if a resource owner receives a Tier 2 exemption under the normal Tier 2 exemption provisions of section II.A. Therefore, we require MISO to,

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[434] PJM Reliability Pricing Model Order, 117 FERC ¶ 61,331 at P 68.

[435] We also note that, in the order establishing MISO's Planning Reserve Auction construct, MISO proposed, and the Commission accepted, a two-year (from the filing date) transition period for the full implementation of MISO's capacity market. *Midwest Indep. Sys. Operator, Inc.*, 139 FERC ¶ 61,199 (2012). Protestors have not demonstrated why a longer transition period is necessary for MISO's proposed modifications to its existing capacity market construct.

[436] PJM Capacity Performance Resource Order, 151 FERC ¶ 61,208 at P 253.

[437] MISO, FERC Electric Tariff, Schedule 53 § II (32.0.0) (proposed).

within 30 days of the date of this order, file revised tariff sheets that clarify that generator planned outages scheduled to begin before September 1, 2022, will receive both a Tier 2 and Tier 1 exemption, consistent with the McFarlane Testimony.

251. Some protestors contend that resource owners will not have sufficient time to ensure preparedness through fuel supply planning and weatherization. We disagree. Resource owners should already make investments in their units to ensure future availability; to the extent that they have not done so, or have been insufficiently incented to do so under MISO's current capacity accreditation rules, we find that this lends further support to MISO's argument that its current construct does not appropriately incent resource owners to ensure their units remain available. Furthermore, the proposal includes a three-year transition period that will gradually increase the weight of RA Hours for purposes of SAC accreditation.

252. We disagree with Entergy Coalition's arguments that acceptance of MISO's proposal constitutes retroactive ratemaking. As noted above, MISO filed the instant proposal 16 months in advance of its proposed implementation; and it will become effective prospectively only. Moreover, although rates must take effect prospectively, there is no prohibition against the use of historical inputs, which MISO proposes to do so here.[438] This is commonly the case for formula rates that use past inputs. MISO's proposal does not alter its rate retroactively. Thus, MISO's proposal does not constitute retroactive ratemaking.

253. We find that MISO has demonstrated that the proposed weighting of RA Hours in determining a resource's SAC accreditation is just and reasonable. Specifically, MISO proposes a tiered weighting structure to determine individual resource accreditation by Season based on each Resource's Real-Time energy offers during Tier 1 hours (*i.e.*, all hours not including RA Hours) and Tier 2 hours (*i.e.*, RA Hours). We are not persuaded by protestors' arguments that MISO's proposed weighting over- or underemphasizes certain hours or by arguments that a resource's entire accreditation should be based on Tier 2 Hours. We find that MISO's proposed weighting of 80% Tier 2 Hours and 20% Tier 1 Hours, which will occur after a three-year transition, is an acceptable approach that reasonably recognizes the importance of a resource's contributions during times of greatest need, recognizes a resource's reliability contributions during all other times, and appropriately accounts for and allows for generator planned outages. In contrast to those who suggest that using a small number of hours to determine the majority of a Schedule

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[438] *See, e.g.*, *PJM Interconnection, L.L.C.*, 172 FERC ¶ 61,054, at P 58 (2020) ("Longstanding practice, Commission and court precedent allow the use of reasonably representative historic test period data to craft rates, terms and conditions of service."). *See also id.* P 54 ("the use of past data to determine prospective costs is not retroactive ratemaking") (citing *Old Dominion Elec. Coop*., 162 FERC ¶ 61,262, at P 50 (2018)).

53 Resource's accreditation, we find that MISO's 65-hour Tier 2 RA Hour target strikes a reasonable balance between being small enough to ensure that a resource's availability during the most needed hours is captured, while being large enough such to reduce volatility, as we discuss further below.[439]

254. We find that MISO has demonstrated that it is reasonable to supplement MaxGen hours with hours that have operating reserve margins as high as 25% in order to meet the 65-hour RA Hour target. While another cutoff may also be just and reasonable, on balance we find it just and reasonable that MISO consider hours other than just MaxGen hours and MISO has supported the proposed 25% cutoff. Performance during hours surrounding MaxGen hours also appear indicative of future performance during times of greatest system need, and reliance only on MaxGen hours, of which there are few, could dramatically increase the need to use AAOC hours.[440] We also note that the 65-hour target intends to include the tightest 3% of hours, which may exceed the number of MaxGen hours. Using a smaller target number of hours could increase accreditation volatility. Relatedly, while resource owners may not know whether an hour with less than 25% operating margin will be considered an "RA Hour" until after the conclusion of a Season, resource owners are on notice that any hour with less than 25% operating margin could potentially be an RA Hour and are thus able to adjust their operations accordingly. Additionally, resource owners can gain some visibility into high-risk hours through MISO's notices of Conservative Operations, which MISO declares based on system conditions including severe weather, hot/cold weather, or geomagnetic disturbance warnings, and Capacity Advisories that indicate the potential for limited operating margins.[441]

255. We find MISO's proposal to use resources with a 12-hour lead time for purposes of calculating the operating margin needed to determine RA Hours and non-RA Hours to be just and reasonable. We recognize that Potomac Economics and Clean Energy Coalition argue that a shorter lead time could also be reasonable given that emergency

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[439] Clean Energy Protest argues that MISO's proposal may overlook periods of increased risk because, according to Clean Energy Protests, MISO's proposal limits RA Hours to 65 hours in a Season. We note that the 65 hours is a minimum target, not a cap, and MISO's proposal designates all MaxGen hours as RA Hours.

[440] *See* MISO Deficiency Letter Response at 4-5 (table demonstrating that the number of MaxGen hours in most seasons is less than or equal to 65).

[441] *See* MISO Operating Procedures at 1, https://cdn.misoenergy.org/Three%20Pager%20-%20MISO%20Operating%20Procedures%2009202018318965.pdf.

conditions may develop with a less-than-12-hour notice.[442] MISO explains that, although it initially considered proposing a 24-hour lead time, it determined that, due to the operational concerns it faces, tight conditions are more likely to be identified 12 hours before a projected capacity shortfall than 24 hours ahead of time.[443] Therefore, we find the 12-hour requirement is a reasonable timeframe to ensure that such resources' contributions are accounted for in the determination of RA Hours.

256. We find MISO has demonstrated that AAOC is a just and reasonable proxy to reflect expected resource availability in Seasons that have not met their 65-hour RA Hour target. Some protestors suggest that, because MISO has proposed a seasonal construct, using non-RA Hours from a particular Season would be a better predictor of resource availability in that Season. However, we are persuaded by MISO and Potomac Economics that using AAOC (which reflects a unit's availability during high-risk hours throughout the year) is a reasonable approach to estimate availability during high risk hours because MISO's proposal intentionally weights RA Hours more heavily than non-RA Hours and including non-RA Hours in a resource's Tier 2 accreditation calculation could overestimate their expected availability in tight conditions. We disagree with protestors that it is unreasonable for certain hours to be used for both a Seasonal RA Hour and as part of a unit's AAOC. MISO explains that such hours "would not statistically constitute double counting because the individual hours would be 1/65th (1.538%) of the resource performance for any RA Hour but would only be 1/260th of the AAOC".[444] We agree with MISO that using a particular hour for both a Seasonal RA Hour and as part of a unit's AAOC has a *de minimis* effect on a resource's overall accreditation and find that MISO's use of AAOC is a reasonable proxy when a season is deficient RA Hours.

257. In response to Midwest TDUs' concern that there is an inconsistency between MISO's testimony and its proposed Tariff language regarding how MISO will replace Seasonal RA Hours that are exempt from a resource's Tier 2 calculation, we note that section III.A.ii of MISO's proposed Schedule 53 states that:

> If there are fewer than 65 hours identified for the Season in Section III.A.i above, additional hours will be identified up to a total of 65 starting with those hours with the lowest Operating Margin that is below a threshold of 25 percent excluding any operating hour where a Resource has a Tier 2 Planned Outage exemption or has periods where the Resource

[442] We note that Potomac Economics states that it finds MISO's filing reasonable as proposed. Potomac Economics Comments at 5.

[443] *See* McFarlane Test. at 23-24.

[444] MISO February 10 Answer at 30.

> was not designated for RAR under Module E-1 of the Tariff.[445]

Regardless of any inconsistency with the testimony, we find that the Tariff is clear with respect to the replacement Seasonal RA Hours.

258. We are not persuaded by arguments that MISO's proposal introduces an unreasonable level volatility in capacity accreditation for a given resource. We find that any seasonal or year-over-year volatility in a resource's SAC accreditation will reasonably reflect supply fundamentals, principally the resource's seasonal availability, and demand fundamentals, through the identification and weighting of RA Hours and non-RA Hours.

259. Regarding arguments that any increased volatility in SAC accreditation is due to MISO's proposed weighting of historical unit performance (as measured by offer behavior) in RA Hours, MISO indicates that volatility, in aggregate, is expected to be very low (less than 2%).[446] As noted above, we find MISO's RA proposal strikes a reasonable balance between identifying RA Hours that represent the times of high risk and having sufficient RA Hour sample sizes, and avoids an undue level of volatility into MISO's resource accreditation. Additionally, we note that MISO's proposal mitigates volatility by using a three-year rolling average. Further, MISO's proposal contains a transition mechanism that mitigates the potential for volatility in the first three years of SAC implementation by gradually scaling up the percentage of a resource's accredited capacity that is based on offers in Tier 2 RA Hours.

260. We are not persuaded by arguments that MISO's proposal will lead to levels of volatility in resource accreditation that disrupt resource planning or inappropriately interfere with state regulatory resource planning. We find that regulatory authorities, LSEs, and resource owners will continue to be able to plan in accordance with MISO's resource adequacy requirements and the objectives of state regulatory authorities. While we acknowledge that individual resource accreditation volatility is possible as a result of MISO's SAC proposal, we expect that any additional volatility to be low and that LSEs will be able to look to historical performance to reasonably estimate future accreditation of their individual resources and resource fleet as a whole to meet their Reserve Requirements. Additionally, MISO's seasonal accreditation construct is premised on the need to better account for resource availability in each Season and matching expected resource availability with the needs in that Season. Accordingly, to the extent a resource's availability to meet MISO system needs varies across Seasons or year-over-

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[445] MISO, FERC Electric Tariff, Schedule 53 § III.A.ii (32.0.0) (proposed).

[446] *See* MISO February 10 Answer at 19-20 (citing RASC presentation at 6 (Sept. 1, 2021)).

year, volatility in that resource's accreditation is warranted and is appropriately captured in MISO's SAC accreditation proposal. Further, we are not persuaded by protestors' concerns that an LSE's entire portfolio will undergo drastic changes. Many LSEs have diverse resource fleets, which mitigates the planning implications of accreditation volatility for individual resources. LSEs that fulfill their resource adequacy obligations with a small number of resources can engage in bilateral arrangements or other hedging vehicles, or procure capacity from the Auction to manage any new accreditation volatility from this proposal.

261. We disagree with Consumers Energy's contention that MISO's proposal arbitrarily reduces the flexibility of resource owners to prudently schedule planned outages and does not address MISO's identified issues. MISO has demonstrated that current system conditions of reduced reserve margins necessitate greater outage coordination to maintain resource adequacy. We find MISO's proposed exemption requirements with respect to the notice and time between outages provide resources with economic incentives to give MISO more advance notice of outages, which should help MISO improve coordinated outage scheduling and maximize availability of resources in all hours, including hours with tight reserve margin conditions.

262. Consumers Energy asserts that MISO does not explain how modifying the exemption rules for prudently planned outages will improve operating or Maintenance Margins. As MISO explains, an "[a]fter the fact review of MaxGen Events often show the significant contribution of planned and maintenance outage to unit unavailability during times of realized LOLE risk."[447] By having additional tools to coordinate planned generator outages and to incent resource owners to submit planned outages with sufficient notice (120 days) through its accreditation rules, MISO and resource owners will have more accurate expectations regarding whether resources will be available when they are needed.

263. We disagree with Consumers Energy's claim that eliminating the ability for generators to schedule planned outages less than 120 days in advance without risking accreditation does not address the correlation between forced outages and insufficient investments in winterization or fuel supply. MISO explains the purpose of this provision is to encourage resource owners to plan outages well in advance to improve outage coordination—not to specifically encourage sufficient investment in winterization of fuel supply. We find that MISO's overall proposal, however, will create incentives for winterization investments when a market conditions warrant, such as higher capacity prices in the Winter Season, which should incent more resources to be available during the Winter Season through either winterization, revised planned outage scheduling, or other means. The seasonality, combined with the accreditation methodology,

[447] MISO May 20 Answer at 9.

dramatically increases the economic incentives for resource owners to take steps including maintenance and weatherization to maximize resource availability, including in non-Summer Seasons.

264. We agree with Entergy Coalition that resource owners may already have economic and system reliability incentives to minimize the length of planned outages. Nevertheless, as discussed above, MISO's planned outage exemption proposals are intended to do more than to solely minimize planned outage length. They are intended to maximize coordination of outages by timing them for when the Maintenance Margin is sufficient. Further, even if such incentives exist in MISO's current provisions, Entergy Coalition does not dispute that MISO's proposal will introduce additional incentives to minimize and coordinate planned outages, which should enhance resource adequacy.

265. We disagree with East Texas and DTE Electric's arguments that MISO has not adequately explained why outages must be scheduled 120 days in advance to be eligible for a Tier 2 exemption. MISO's outage exemption criteria with respect to the 120-day lead time encourages resource owners to give MISO more visibility and advance notice of available resources, which is needed in order to ensure resource adequacy in future periods. We find that the 120-day lead time appropriately balances the need for resources to have flexibility to schedule planned outages and the need for MISO have such visibility. We also disagree with Entergy Coalition and Consumers Energy's contentions that MISO's proposed 120-day lead time criteria could have the perverse effect of discouraging resources from performing maintenance activities, and thereby resulting in worse unit performance. Given the functional relationship between resource accreditation and resource availability, we believe that resources will not risk delaying necessary maintenance, because such delays could result in resource underperformance, unavailability, or forced outages, which would negatively impact that resource's future accreditation. We believe that together, the incentives will encourage resource owners to appropriately balance maximizing short-term availability when it is most needed and to perform maintenance, which requires scheduling planned outages, to ensure long-term resource performance.

266. We find that MISO has sufficiently explained and supported the proposed requirement to have a planned outage no sooner than 120 days after the previous planned outage to receive full exemptions. As MISO explains, this requirement serves to disincentivize frequent planned outages.[448] We find that MISO's proposal limiting outages reasonably balances resource owner flexibility with the need to coordinate outages. While there may be efficiencies and advantages to allowing additional flexibility (for example, being able to "split" a planned outage around days where the Maintenance Margin is negative, rather than having to submit two outages 120 days

[448] MISO Deficiency Letter Response at 13.

apart), we do not find that the lack of such flexibility renders the proposal unjust and unreasonable. We further find that this provision largely addresses concerns, articulated by WEC Utilities, about the potential to "hoard" outage dates.

267. We disagree with Entergy Coalition and East Texas arguments that outage exemptions should be granted whenever the Maintenance Margin is greater than zero. MISO's Maintenance Margin calculation is a forward-looking calculation based on Planning Year inputs from resource adequacy and the annual LOLE study. Maintenance Margin results subtract current planned generator outages in the Control Room Operations Window from the Maintenance Limit provided by resource adequacy and provides the number of MW that are available for scheduling generator outages while still allowing MISO to meet all its obligations.[449] Since the Maintenance Margin is a function of planned generator outages it does not take into account resources that may be on unplanned or forced outage. To this end, the Maintenance Margin does not give a complete picture of system reliability, but rather projects a snapshot which is intended to be used to identify time periods where there is available margin for a generator to take a planned outage.[450] Furthermore, as described above, there is a value in MISO having more advance notice and improved visibility into planned outages. Granting exemptions whenever the Maintenance Margin is above zero, as suggested by Entergy Coalition and East Texas, would reduce the incentive for resource owners to schedule outages well in advance and would reduce information available to MISO operators about resource outages, thereby decreasing operator confidence in future projections of future resource availability.

268. We disagree with the Mississippi Commission and Clean Energy Coalition arguments that outage planning and coordination is an operational issue and not a "marketplace issue." As an initial matter, no Commission policy precludes Tariff proposals pertaining to "operational issues" if the primary substance of the filing pertains to markets. Market and operational issues are inextricably linked as these markets are designed to price, schedule, and dispatch energy and ancillary services over the

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[449] MISO, FERC Electric Tariff, Module A, § 1.M (71.0.0) ("Projected megawatts of additional generation that can be taken out of service for planned maintenance within MISO during a given time period without impacting adequacy of generation supply. The projection will be based on a forward looking [LOLE] analysis with known Proposed Generator Planed Outages of entire units.").

[450] We note that, to the extent that system conditions change as a planned outage start date near, MISO's proposal allows MISO to grant exemptions if a generator owner reschedules its planned outage at MISO's request due to "weather, forced outages, or other conditions listed in the [BPM] for Outage Operations. . ." *See* MISO, FERC Electric Tariff, Module E-1, § Schedule 53.II.A.iii (32.0.0)

operational timeframe (i.e., the 24-hour operating day). Furthermore, MISO's filing recognizes the interaction between operational and marketplace issues. Operational decisions can affect market outcomes, and market prices and incentives can affect operational decisions. Additionally, precedent exists for the Commission accepting proposals regarding Tariff revisions for how resource outages affect their participation in capacity constructs. Specifically, the Commission accepted MISO's 2019 proposed Tariff revisions limiting the ability of resources to participate in the Auction if that resource has full or partial outages that last for any 90 or more of the first 120 Calendar Days in the Planning Year.[451]

269. We disagree with Duke Energy and MISO TOs' contention that MISO needs to provide more support for excluding prudently planned derates from accreditation exemptions. As MISO explains, such derates have tended to be short-term in nature and would require further modifications to MISO's current outage coordination process which does not consider derates. However, we encourage MISO to continue to evaluate whether its current outage coordination process could be improved in light of MISO's instant proposal, including how derates impact SAC accreditation as MISO gains experience with the SAC exemptions over time.

270. We accept as just and reasonable MISO's proposal to outline in the BPM for Generator Outage additional criteria that MISO would use to determine whether a planned outage passes the No Harm Test.[452] We find that MISO's proposed Tariff language provides sufficient detail regarding what circumstances MISO will grant Tier 1 exemptions: (1) when resource owners submit a planned outage less than 31 days in advance and at least 14 days in advance of the outage start date; (2) when the planned outage occurs entirely during a period with adequate Maintenance Margin; and (3) when the planned outage does not cause harm, with the Tariff detailing the possible ways that the planned outage could cause harm. We do not believe that it is necessary to require that the Tariff contain further detail.[453]

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[451] *Midcontinent Indep. Sys. Operator, Inc.*, 170 FERC ¶ 61,066 (2020) (2020 Summer Outage Order).

[452] Section II.C of proposed Schedule 53 states that "[t]he No Harm Tests include, but are not limited to, outage approval, compliance with all applicable operation guides, review of possible conflicting outages or system conditions, and system capacity (Maintenance Margin, Multiday Operational Margin, 30-day margin). It also includes the criteria outlined in the [BPM] for Generator Outage." MISO, FERC Electric Tariff, Schedule 53 § II.C (32.0.0) (proposed).

[453] *Energy Storage Ass'n v. PJM Interconnection, L.L.C.*, 162 FERC ¶ 61,296, at P 103 (2018); *see also City of Cleveland v. FERC*, 773 F.2d 1368, 1376-77 (D.C. Cir.

271. Similarly, we disagree that MISO's Tariff should be revised to contain additional detail on accreditation for Dispatchable Intermittent Resources and Intermittent Generation. MISO's effective Tariff provides the same level of detail in this regard as MISO's proposed Tariff. As MISO is merely proposing to use its current accreditation process for Dispatchable Intermittent Resources and Intermittent Generation and apply it seasonally, rather than annually, further detail is unnecessary.

272. We find that it is just and reasonable to cap a resource's offer at its GVTC for purposes of SAC accreditation, as MISO proposes. First, as protestors acknowledge, MISO will use seasonally corrected GVTC values, which are calculated by conducting a single real power test or using operational data that is adjusted for each Season using that Season's peak conditions. We agree with MISO that capping SAC accreditation at GVTC, which is the basis for UCAP, prevents the UCAP/ISAC ratio from being skewed, which could misalign accreditation values with the LOLE model. Although it is possible that in some specific circumstances resources can produce energy above their GVTC, such performance may be less certain in future circumstances than amounts at the GVTC. Further, nothing in the record indicates that resource output frequently exceeds their GTVC such that allowing ISAC accreditations to exceed GVTC would materially impact the final SAC accreditation values of resources.

273. With respect to Duke Energy's arguments, as discussed above, we find it just and reasonable for MISO to accredit Schedule 53 Resources based on their prior offered availability, which MISO's determines through a resource's Hourly Emergency Maximum Limit (or Targeted Demand Reduction Level). To the extent that a resource is unable to submit an Hourly Emergency Maximum Limit (or Targeted Demand Reduction Level) because there is no expectation of that resource being able to inject into the grid at that level, we find it reasonable for MISO to not consider a resource as having offered availability in those hours. We further note that nothing in the record indicates that a Schedule 53 Resource's accreditation will be materially impacted by not including intervals where the resource is being committed or decommitted.

274. We are not persuaded that a mechanism to transition GIAs to higher Winter capacity values is necessary. We disagree that the lack of a mechanism unduly harms units that have Winter output capabilities that exceed the level of interconnection service that they receive under their GIA. Under MISO's proposal, Schedule 53 Resources will be accredited based on their availability and output, which may be limited not only by the

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1985) (*City of Cleveland*) (affirming the Commission's decision not to require that certain terms be included in the tariff, explaining that "only those practices that affect rates and service *significantly*, that are reasonably *susceptible* of specification, and that are not so generally understood in any contractual arrangement as to render recitation superfluous" must be included in a tariff) (emphasis in original).

resource's operating characteristics but on the level and amount of interconnection service that it receives under its GIA. Under MISO's GIP, MISO studies resources in the interconnection queue based on the level of requested interconnection service requested by the customer in order to preserve system reliability, and allowing resources to go above that level could compromise system reliability.[454] As MISO notes, its existing GIP allows interconnection customers to request incremental interconnection service, and all resource owners are free to do so should they wish to take advantage of potentially higher Winter output capabilities.[455] We find that the seasonal provisions contemplated in this proposal are just and reasonable without further revisions to MISO's GIP. With regard to the fact that some SAC values may be higher than a resource's existing interconnection service, we note that, under MISO's current resource adequacy construct, a resource's UCAP value can exceed its existing interconnection service.

275. We find that MISO's proposal to treat offline resources with lead times in excess of 24 hours as unavailable during RA hours, such that they receive zero credit for purposes of SAC accreditation, is just and reasonable because they provide little reliability value to MISO. As MISO explains, MISO's proposed 24-hour lead time threshold for SAC accreditation appropriately reflects whether MISO could have reasonably committed the resource in its Day-Ahead Market or Forward Reliability Assessment Commitment process.[456] Resources that can be committed through the Day-Ahead or Forward Reliability Assessment Commitment process contribute to MISO's resource adequacy needs and thus we find MISO's proposal to accredit these resources to be just and reasonable.

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[454] *See, e.g.*, *Ariz. Pub. Serv. Co.*, 170 FERC ¶ 61,111, at P 39 (2020) (noting that in Order No. 845, the Commission required, in *pro forma* LGIP revised section 3.1, that transmission providers have a process in place to consider requests for interconnection service below the generating facility capacity and that the Commission stipulated that such requests should be studied at the level of interconnection service requested for purposes of determining interconnection facilities, network upgrades, and associated costs, but that such requests may be subject to other studies at the full generating facility capacity to ensure safety and reliability of the system.) (citing *Reform of Generator Interconnection Procs. & Agreements*, Order No. 845, 163 FERC ¶61,043, at PP 383-384 (2018)); *see also Midcontinent Indep. Sys. Operator, Inc.*, 108 FERC ¶ 61,027, at P 26 (2004) (generators operating above the output limits, which the generators themselves provide, can compromise system reliability).

[455] *See* MISO February 10 Answer at 38-39.

[456] *See* McFarlane Test. at 24.

276. We are not persuaded by arguments that MISO should use a shorter lead time than 24 hours (e.g., 12 hours) in SAC accreditation because a lead time less than 24 hours could inappropriately ignore the role that resources with lead times of up to 24 hours play in meeting MISO's resource adequacy needs. Although MISO notes that tight conditions are "more likely" to be identified 12 hours beforehand than 24 hours beforehand, this suggests that some resource adequacy needs are identified 24 hours beforehand.[457] The Day-Ahead Market or Forward Reliability Assessment Commitment process can be used to address MISO's resource adequacy needs and we disagree with arguments or suggestions that resources that can be committed through either of these processes (i.e., resources with startup times up to 24 hours) should not be accredited at a level commensurate with their ability to meet those needs. For example, MISO could identify certain capacity needs over a longer time horizon than 12 hours, such as resources being out on an extended planned or forced outage, transmission maintenance that creates a capacity need, or certain meteorological events forecast 24 or more hours in advance. To the extent that MISO uses either the Day-Ahead Market or Forward Reliability Assessment Commitment processes to meet these or other needs, we find it appropriate to accredit resources commensurate with their ability to meet those needs. Further, we believe that a resource being unavailable within 12 (or fewer) hours because MISO did not select it through a day-ahead or FRAC commitment process is not a reasonable basis to penalize that resource by assigning it a zero SAC accreditation value for those hours.

277. We find MISO's proposed UCAP/ISAC conversion ratio to determine a Schedule 53 Resource's final SAC value to be just and reasonable. Acknowledging MISO's own admission of the disconnect between the UCAP-based resource valuation in the LOLE model and the availability-based SAC accreditation, we accept the use of a UCAP/ISAC ratio as just and reasonable because it is necessary to address the misalignment between MISO's current LOLE planning model that produces UCAP-based Reserve Requirements and the proposed SAC accreditation method. The UCAP/ISAC ratio also prevents the need to modify its LOLE model and convert Reserve Requirements and Local Clearing Requirements into SAC terms, and maintains an appropriate supply and demand balance in the Auction. We agree with MISO and Potomac Economics that the proposed ratio is reasonable and that applying the ratio to the ISAC (supply) side prevents some of the unintended consequences that would occur by applying a similar ratio to Reserve Requirements, such as the possibility that the Auction Clearing Price would increase. In addition, as discussed further below, the proposed UCAP/ISAC ratio prevents inappropriate impacts on the accreditation of non-Schedule 53 resources. Further, noting MISO has already pledged to do so, we encourage MISO to continue exploring whether its LOLE study can use SAC instead of UCAP.

[457] *See* McFarlane Test. at 24.

278. While Entergy Coalition notes that the application of the UCAP/ISAC ratio means that some Schedule 53 Resources may have final SAC ratings that exceed their GVTC rating, Entergy Coalition does not explain why this this is unreasonable, or why SAC, rather than ISAC, is appropriate to compare to GVTC. We find that this potential outcome, which Entergy Coalition has not demonstrated will have a material impact on the reliability or the Auction, or occur frequently, is a byproduct of the UCAP/ISAC conversion ratio, which as noted above, we find to be just and reasonable.

279. We find, contrary to Clean Energy Coalition's argument, that the UCAP/ISAC ratio does not lead to unduly discriminatory treatment between Schedule 53 and non-Schedule 53 Resources. While Clean Energy Coalition is correct that Schedule 53 Resources and certain non-schedule Resources will be both accredited based on availability, that alone does not necessitate application of the UCAP/ISAC ratio to non-Schedule 53 Resources. As MISO explains, the purpose of the UCAP/ISAC ratio is to ensure continued alignment between MISO's UCAP-based Reserve Requirements and its SAC proposal, such that the overall supply/demand balance of MISO's capacity market generally remains unchanged. In addition, the UCAP/ISAC ratio recognizes that, although Schedule 53 Resources are likely to be accredited less ZRCs using the SAC method (as compared to the current UCAP-based method), one ZRC of SAC accreditation provides more reliability value than one ZRC of UCAP accreditation. In contrast, non-Schedule 53 Resources will continue to be accredited using their existing accreditation framework, with modifications to account for a seasonal construct. As such, they will not experience the same level of accreditation reduction as Schedule 53 Resources. Clean Energy Coalition has provided no evidence that the existing accreditation methodologies for non-Schedule 53 Resources such as wind undervalue their resource adequacy contributions. Applying the UCAP/ISAC ratio to non-Schedule Resources will result in overvaluing those resources, potentially harming resource adequacy due to insufficient resources being used to meet the Reserve Margin while maintaining the 0.1 LOLE target.

280. We find that MISO has sufficiently justified excluding External Resources from the Schedule 53 Resource definition and SAC accreditation. MISO explains that External Resources do not submit Generation Offers into MISO's real-time market, meaning that MISO does not have the data to accredit those resources using the SAC method.

281. We disagree with protestors that contend that the SAC methodology should be applied to both Schedule 53 Resources and intermittent resources. As an initial matter, we note that these two resource groups are already accredited using different methodologies. Having different accreditation methodologies for different types of resources does not necessarily present undue discrimination; in fact, it is often the case that the operating characteristics of different resource classes require various different

accreditation frameworks.[458] Further, we agree with MISO that it is appropriate that the LOLE risk target used in the wind ELCC accreditation calculation be distinct from the risk target used in determining seasonal Reserve Requirements. Clean Energy Coalition's concern with MISO's use of ELCC for purposes of wind accreditation under a seasonal construct rests on the assumption that MISO must "demonstrate that the two accreditation methodologies do work together and assess capacity availability during the same risk hours in order for the construct to hold together both theoretically and practically to ensure a reliable system that can meet load during these high-risk hours."[459] MISO has, in this instant filing, proposed: (1) an availability-based accreditation methodology for Schedule 53 Resources, to be applied to MISO's new seasonal resource adequacy construct; and (2) revisions to its existing methodologies for non-Schedule 53 Resources to allow those resources to be accredited on a seasonal basis. We find these revisions to be just and reasonable, and we do not believe that further revisions to non-Schedule 53 Resource accreditation is required at this time.

282. We also disagree with Clean Energy Coalition's argument that MISO's proposal is unjust and reasonable because it does not expressly consider fuel supply risk for coal and gas resources but does consider fuel supply risk for wind and solar resources. While it is true that the SAC methodology is indifferent as to *why* a resource is available or unavailable during emergency periods, the SAC accreditation implicitly accounts for fuel availability because it is specifically designed to ensure that, if a resource is unavailable and has not received a Tier 1 or Tier 2 exemption—whether due to fuel or other reasons—it will not receive credit for those hours and the resource's SAC accreditation will be lower as a result. Arguably, MISO's availability-based SAC proposal brings conventional Schedule 53 generators and intermittent accreditation closer together in this regard, as MISO's current accreditation construct assumes 100% fuel availability for conventional generators. However, to the extent that Clean Energy Coalition is concerned that certain gas or coal units are overvalued because they have not able to contribute in emergency periods due to fuel supply issues, we believe that MISO's proposal should alleviate, rather than exacerbate, those concerns.

283. Contrary to Industrial Customers' argument that MISO's proposal to increase the minimum number of required interruption calls for LMR DRs to receive 100% capacity accreditation for the full Planning Year from 10 to 16 per Planning Year is unjust and unreasonable, we find that MISO's proposal, in conjunction with the move to a seasonal

[458] In PJM's ELCC proposal, the Commission explicitly found that PJM, which uses a rating based on UCAP for unlimited resources, "need not extend the ELCC framework to Unlimited Resources to demonstrate that its filing is just and reasonable." *PJM Interconnection*, 176 FERC ¶ 61,056 at P 70.

[459] Clean Energy Coalition Response to MISO Deficiency Letter Response at 6.

resource adequacy construct, is just and reasonable and sufficiently supported. MISO's current requirement of a minimum of 10 interruption calls during a Planning Year for LMR DRs to receive 100% capacity accreditation is based on an annual resource adequacy construct. As an initial matter, increasing the number of interruption calls on LMR DRs to receive full capacity accreditation from the status quo is not in and of itself unjust and unreasonable. Such an increase occurred in 2020, when the Commission accepted MISO's proposal to increase the minimum number of required interruption calls for LMR DRs to receive 100% capacity accreditation from 5 to 10 per Planning Year based on "a reasonable methodology through its reliability analysis to account for [LMR DR] potential unavailability."[460] Here too, we find that MISO has developed a reasonable methodology to account for LMR DR unavailability. However, MISO now does so on a seasonal basis. To receive 100% capacity accreditation in a particular Season under the proposed seasonal resource adequacy construct, LMR DRs are, required to allow for at most five interruption calls per Season. Under this proposal, an LMR DR is able to receive a level of capacity accreditation below 100% if it allows the minimum number of interruption calls for a particular Season, as opposed to the current construct which requires at least five interruption calls in a Planning Year to receive 80% capacity accreditation (LMR DRs that do not allow for at least five interruption calls in a Planning Year do not receive any capacity accreditation). Furthermore, we find that the 16-call requirement (to receive 100% capacity accreditation for all four Seasons) is consistent with the 2020 LOLE Analysis that MISO cites to support the need for 15 annual calls to receive 100% accreditation, while allowing for consistency among Seasons.

284. We disagree with the Mississippi Commission argument that MISO's proposal marginalizes state decisions regarding generation investment and construction, and thus would be beyond the Commission's authority to accept. Our acceptance of MISO's proposal does not prevent states from exercising their jurisdiction to make generation-related decisions under FPA section 201.[461] As the Commission has held:

> The Commission does not interfere with the states' authority over generation facilities, local reliability, retail sales or other matters the FPA reserved to the states merely by implementing wholesale rules affecting matters within the states' jurisdiction. We recognize that the FPA reserves to the state decisions concerning

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[460] LMR DR Accreditation Order, 172 FERC ¶ 61,138 at P 49.

[461] *See, e.g.*, *Calpine Corp*., 169 FERC ¶ 61,239, at P 174 n.345 (2019) ("States may choose to acquire whatever generation resources they like, but it remains the duty of this Commission to ensure that those choices do not cause unjust, unreasonable, or unduly discriminatory or preferential rates for wholesale transactions in interstate commerce." (citing *Conn. Dept. of Pub. Util. Control v. FERC*, 569 F.3d 477, 481 (D.C. Cir. 2009)).

> generation; but the FPA provides the Commission with the jurisdiction and authority to regulate rates for wholesale sales made by those generation resources, and we are obligated to ensure that such rates are just and reasonable and not unduly discriminatory or preferential.[462]

285. In response to Duke Energy's argument that MISO has not shown how the proposed SAC accreditation calculation will accurately account for jointly owned units, we are not persuaded that additional clarity is needed at this time. MISO's current Tariff provisions do not explicitly account for jointly owned units, and we do not find that MISO's Schedule 53 Resource accreditation provisions requires any additional explanation.

3. Capacity Replacement

a. MISO Filing

286. MISO states that its current capacity replacement requirements are limited to suspensions and retirements of resources and carry no specific financial non-compliance provisions. MISO argues that these limited requirements are no longer sufficient as the performance and availability of committed capacity to meet seasonal requirements will be critical. MISO proposes to require replacement for any Planning Resource that will be on planned outage or planned derate for more than 31 days in a Season in which they clear. MISO states that it is also proposing provisions allowing the replacement of resources that have experienced catastrophic outages, enabling such resources to maintain class average accreditation upon return to service.[463]

287. MISO proposes a Capacity Replacement Non-Compliance Charge for Resource owners that do not replace Planning Resources that retire or suspend during a Season, or are on planned outage or planned derate for more than 31 days in a Season. MISO states that the Capacity Replacement Non-Compliance Charge will be a daily charge, equal to the amount of ZRCs that failed to be replaced multiplied by sum of the Auction Clearing Price and the daily CONE value. MISO states that the Capacity Replacement Non-Compliance Charges will be distributed to Market Participants representing LSEs on a *pro rata* basis, based upon the LSE's share of total Reserve Requirements for the MISO Region.[464]

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[462] *N.Y. State Pub. Serv. Comm v. N.Y. Indep. Sys. Operator, Inc.*, 173 FERC ¶ 61,060, at P 37 (2020) (footnotes omitted).

[463] Transmittal at 14.

[464] *Id.* at 15.

b. Comments and Protests

288. OMS contends that it is entirely reasonable for MISO to require resources that receive capacity credit and capacity payments to be available to offer energy for a large part of a given Season.[465]

289. Clean Energy Coalition argues that MISO's proposed capacity replacement provisions invalidate the proposed methodology for availability-based accreditation, since there may not be a strong correlation between a resource's historic performance at peak times and its future inclination to perform.[466] Clean Energy Coalition also argues that the replacement methodology fails to consider transmission constraints of the replacement resource and provides replacement resources with a class average rating even if it were not historically available.[467] COMPP argues that existing Tariff provisions that prevent Capacity Resources from participating in the Auction or being included in a FRAP if they are on outages expected to last 90 or more days of the first 120 Calendar Days in the Planning Year is not a creature of intentional physical withholding but rather the result of litigation stemming from resources committing capacity, getting paid to provide capacity, and then going on outage for an extended period and not being available for MISO dispatch. COMPP suggests that MISO's proposal would allow resources to commit capacity despite advanced knowledge of being unavailable for more than one-third of a Season and reinstate a similar flaw to its previously fixed construct.[468]

290. Several entities argue that MISO has not justified requiring replacement of capacity for outages lasting more than 31 days in a Season.[469] The Louisiana Commission suggests that the 31 day cutoff is random and imposes a discriminatory impact on generating units that require regular maintenance exceeding 31 days.[470] COMPP argues that MISO's blanket 31 day availability exemption is inconsistent with MISO's stated objectives of better aligning resource commitments with periods of

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[465] OMS Comments at 4.

[466] Clean Energy Coalition Protest at 16.

[467] *Id.* at 17.

[468] COMPP Protest at 9 (citing 2020 Summer Outage Order, 170 FERC ¶ 61,066).

[469] Mississippi Commission Protest at 7-8; MISO TOs Comments at 7; Louisiana Commission Protest at 3-4; Duke Energy Comments at 7-8; COMPP Protest at 10; Entergy Coalition Protest at 15; Midwest TDUs Protest at 26; IPL Protest at 3.

[470] Louisiana Commission Protest at 3-4.

resource availability.[471] COMPP recommends instead that the Commission preclude Capacity Resources from committing capacity to a Season in which a planned or forced outage is expected to exceed 20 days, and to provide a physical withholding exemption to Capacity Resources unavailable due to a planned or forced outage for 20 days or more in each Season. Alternatively, COMPP proposes that the Commission install eligibility rules that permit outages for 40 days in the Spring and Fall, and 20 days in the Winter and Summer.[472] Entergy Coalition contends that MISO has not provided any support, explanation or demonstration for its claim that planned outages more than 31 days in duration are causing system reliability issues. Entergy Coalition has requested MISO provide this type of analysis, but MISO has yet to do so.[473] IPL proposes that the 31-day threshold be changed to 45-days.[474]

291. MISO TOs contend that the accelerated timeframe of developing MISO's proposal did not allow for a complete assessment of modeling the expected extended planned outages and simulation of the Auction to indicate the amount of capacity available for capacity replacement transactions.[475] MISO TOs state that resource owners who are short of capacity will have approximately eight months to add capacity, and that it is unclear whether market participants will "reserve" capacity for replacement or rely on the capacity market, which may be short.[476] MISO TOs assert that explicit Tariff language is necessary for market participants to incorporate the risk of replacement capacity within capacity offers without the reservation being treated as withholding.

292. Midwest TDUs, MISO TOs, and Entergy argue that, if an outage is planned in accordance with the Tariff to receive an outage exemption, then there is no reason to assume that the planned outage will materially increase system reliability risk and therefore, it is unreasonable to penalize the resource.[477] Midwest TDUs add that MISO's proposed requirements for Planned Outage exemptions for accreditation purposes do not include any 31-day limit, yet MISO proposes to subject such resources to replacement

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[471] COMPP Protest at 10.

[472] *Id.* at 12.

[473] Entergy Coalition Protest at 15.

[474] IPL Protest at 3.

[475] MISO TOs Comments at 7.

[476] *Id.* at 8.

[477] Midwest TDUs Protest at 26-27; MISO TOs Comments at 7; Entergy Coalition Protest at 16-17.

capacity requirements and associated penalties, even if they schedule planned maintenance more than 120 days in advance and during times of adequate maintenance margin.[478]

293. Entergy Coalition and Midwest TDUs contend that planned outages that exceed 31 days can provide efficiencies and benefits that cannot be realized by shorter duration outages.[479] Entergy Coalition states that, based on its experience with steam units, for example, 7-10 days of the outage is associated with a cool down time required for the turning gear before primary maintenance work can start, and a 2-3 day post-outage start-up preparation. Entergy Coalition explains that this means that 29% to 42% of the 31-day planned outage period would be consumed by complying with original equipment manager asset protection guidelines instead of performing primary maintenance activities.[480] Entergy Coalition states that, in contrast, if a planned outage period longer than 31 days is used, then a higher percentage of the outage period is being used to perform primary maintenance work instead of prep-work and post-outage startup tasks. Entergy Coalition states that MISO's more-than-31-days outage rule is at odds with industry experience and will restrict generation owners' ability to perform necessary planned maintenance activities in the most cost-effective manner.[481] Midwest TDUs argue that imposition of the capacity replacement requirement is inconsistent with the basis for MISO's Planning Reserve Margin, as MISO's Tariff expressly requires MISO to consider long outages when it sets the Planning Reserve Margin applied to LSEs. Midwest TDUs contend that, because the Planning Reserve Margin is set at a level to assure sufficient capacity to cover long outages, it is unnecessary and inappropriate to additionally require a resource experiencing an extended planned outage to replace that resource or pay Capacity Replacement Non-Compliance Charges. Midwest TDUs state that MISO's filing does not justify the need to procurement of capacity above and beyond the amount MISO determined was required in establishing its Planning Reserve Margin.[482]

294. Others allege that the lack of a robust and transparent bilateral market for replacing ZRCs create the potential for the exercise of market power.[483] Ameren states

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[478] Midwest TDUs Protest at 26.

[479] Entergy Coalition Protest at 17; Midwest TDUs Protest at 26.

[480] Entergy Coalition Protest at 17.

[481] *Id.* at 17-18.

[482] Midwest TDUs Protest at 27.

[483] Ameren Protest at 6; Midwest TDUs Protest at 34.

that, while MISO's proposal assumes there is a robust and liquid market for replacement capacity, Ameren's experience in finding replacement capacity under the current construct is already challenging because liquidity is often low. Ameren submits that it has no confidence that moving to a shorter period to find replacement capacity will improve liquidity or that there will be interest in selling replacement capacity for days and not weeks or months. Ameren argues that MISO fails to acknowledge the lack of liquidity in the bilateral replacement market and thus the potential for the exercise of market power. [484] Midwest TDUs add that the limitation to procure replacement capacity to capacity deliverable to the same Zone raises market power concerns, as well.[485]

295. East Texas asserts that MISO has not justified the new capacity replacement requirements for facilities with planned outages greater than 31 days, nor why such an approach would not provide incentives for owners with a planned extended outage to simply withhold the unit from the seasonal auction, thereby artificially tightening the planning margin.[486]

296. Entergy Coalition argues that MISO's proposal systematically and unreasonably penalizes nuclear resources. Entergy Coalition submits that MISO's own data provided in the stakeholder process shows that over 50% of historic nuclear planned outages exceed 31 days.[487] Entergy Coalition states that focused outages at nuclear plants make these plants even more efficient because they offer the opportunity to perform maintenance that would be more difficult if the plant remained online, and that by conducting inspections and performing maintenance at the same time as refueling, workers can eliminate the need to power down the plant at other times to perform the same work. Entergy Coalition states that this allows nuclear plants to produce electricity continuously for months and even years at a time—a feature no other electricity source provides.[488]

297. Energy Coalition states that it is concerned that MISO's proposal will create additional risks of supply shortfalls and CONE pricing because it allows generation owners to withhold a resource from a Season's Auction if that resource is scheduled to have a planned outage that exceeds 31 days during that Season. Entergy Coalition further states that in addition to concerns about supply shortfalls and elevated CONE pricing, it

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[484] Ameren Protest at 6.

[485] Midwest TDUs Protest at 33.

[486] East Texas Protest at 9-10.

[487] Entergy Coalition Protest at 16-17.

[488] *Id.*

is also concerned that the auction withholding option may allow some market participants to manipulate Auction clearing prices and result in less generation being available to meet system reliability needs.[489]

298. Midwest TDUs submit that MISO's Tariff language is inconsistent with its proposal as described. As one example, Midwest TDUs note that MISO explains that Capacity Replacement Non-Compliance Charges apply when a resource exceeds the 31-day outages threshold and fails to replace the ZRCs associated with those days; however, elsewhere in the same proposed Tariff provision, MISO states that "ZRC replacement shall have no impact on settlements from the [Auction] and FRAPs, including any assessed Capacity Replacement Non-Compliance Charges."[490] Midwest TDUs assert that this wording suggests that capacity replacements "have no impact" on Capacity Replacement Non-Compliance Charges, contrary to other proposed language in the Tariff and the purpose of the charge.[491]

299. Midwest TDUs assert that MISO's proposal is arbitrary in that it treats outages differently depending on whether they occur in a single Season or span across Seasons. According to Midwest TDUs, a 32-day planned outage in one Season would be treated more harshly than a 60-day planned outage that falls evenly across two Seasons. Midwest TDUs argue that this distinction creates perverse incentives for resources to seek to schedule planned outages to fall over two Seasons, which could undermine MISO's reliability goals. Midwest TDUs contend that this is particularly discriminatory with respect to smaller LSEs. Midwest TDUs state that smaller LSEs tend to participate as minority owners in larger plants to take advantage of economies of scale, and that minority interest may constitute a significant portion of its resource portfolio. Midwest TDUs add that the majority owner typically has authority to operate the resource and schedule planned outages, and minority owners generally have no control over planned outage scheduling. Midwest TDUs state that MISO's proposal could impose harsh penalties and disproportionate burdens on smaller LSEs based on factors beyond their control.[492]

300. Midwest TDUs state that MISO's filing exposes LSEs to additional burdens and charges when their resources are unavailable due to planned or reasonably anticipated unplanned outages exceeding 31 days in a Season, regardless of whether the LSE had a

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[489] *Id.* at 18.

[490] Midwest TDUs Protest at 25 (citing MISO, FERC Electric Tariff, Module E-1 § 69A.3.1.h.b.i (39.0.0) (proposed)).

[491] *Id.*

[492] *Id.* at 27-28.

choice in the matter. Midwest TDUs submit that this proposal would effectively remove such an LSE from the benefits of MISO's reserve-sharing pool, contrary to long-established precedent. Midwest TDUs argue that MISO frequently touts the benefits of reserve sharing, yet MISO's proposal leaves an LSE to fend for itself when it faces outages in excess of 31 days in a Season.[493]

301. Midwest TDUs contends that nothing in MISO's proposed Tariff provides any information about how MISO will distinguish unplanned outages that are subject to the capacity replacement obligation from those that are not. Midwest TDUs contend that the Commission should direct MISO to include all significant elements of its proposal in the Tariff itself.[494] Midwest TDUs add that MISO proposes to replace existing physical withholding provisions, found in section 64.1.1.g.xi of the Tariff, with one stating that a Market Participant submitting an outage for greater than 31 days of a Season can ask the Market Monitor for a determination ahead of the Auction allowing it to forego offering excess ZRCs from the resource without being deemed to have engaged in physical withholding. Midwest TDUs state that neither MISO's proposed Tariff language nor its filing explains what criteria the Market Monitor will use to make this determination. Midwest TDUs argue that this information should be included in the Tariff because the outcome of this determination may be relevant to the decision on whether and when to take a planned outage that exceeds 31 days.[495]

302. Some entities argue that it may be difficult for resources to replace their capacity. Midwest TDUs state that even if the resource has sufficient notice of an outage exceeding 31 days within a Season such that it could seek to line up replacement capacity in advance of the Auction, the resource may be competing with those seeking ZRCs for a full Season, rather than a more limited period. Midwest TDUs further state that, because replacement ZRCs must be from a resource that is not scheduled for a planned outage during the period when the resources at issue needs to be replaced, the replacement process is more complicated because maintenance schedules are confidential.[496] IPL contends that market participants should be authorized to hold some reasonable quantity of capacity as a reserve or hedge against non-performance of a cleared capacity to avoid non-performance penalties. IPL contends that a safe harbor percentage above the

[493] *Id.* at 28-29.

[494] *Id.* at 45-46.

[495] *Id.* at 46-47.

[496] *Id.* at 33-34.

existing 50 MW physical withholding threshold quantity for Planning Resources designated to satisfy resource adequacy requirements should be authorized.[497]

303. Midwest TDUs contend that MISO's replacement capacity requirement for resources with outages exceeding 31 days in a Season penalizes the resource owner when combined with the proposed accreditation rules, creating a "double-whammy" effect. Midwest TDUs state that, unless the outage is exempted, a planned outage exceeding 31 days could both: (1) trigger Capacity Replacement Non-Compliance Charges if the capacity is not replaced; and (2) impact future accreditation, particularly if the resource was not available during RA Hours. Midwest TDUs explain that, on top of paying Capacity Replacement Non-Compliance Charges, a resource subject to a planned outage exceeding 31 days in a Season that did not satisfy accreditation exemption requirements would be deemed unavailable during the outage period, thus reducing its accredited capacity for that Season for the next three years. Midwest TDUs state that an unplanned outage that MISO retrospectively deems could have been reasonably anticipated would never qualify for a Tier 2 Planned Outage exemption for accreditation purpose and thus would always impact accreditation if such an outage happens to occur in an RA Hour.[498] Midwest TDUs argue that resources experiencing an extended outage should be able to avoid adverse impacts on accreditation if they replace the capacity. Midwest TDUs state that Seasonal RA Hours will exclude Tier 2 Planned Outage exemptions, as well as periods where the resource was not committed for capacity under Module E-1 of the Tariff. Midwest TDUs state that this could be read to exclude from RA Hours the period where a Capacity Resource on a non-exempt outage beyond 31 days had, by securing a replacement, transferred its commitment for the relevant period to the replacement resource, so the resource at issue was not considered "committed capacity" for that period. Midwest TDUs state that, if MISO intends for these provisions to protect against adverse accreditation impacts for resources on extended outage that procure replacement resources, MISO should be required to revise them to clarify. Midwest TDUs contend that the Tariff should expressly describe the relationship between replaced capacity and Schedule 53's accreditation calculation, as well as consistently include the unplanned outages to which MISO proposes to apply the capacity replacement requirements.[499] IPL agrees that, if a Capacity Replacement Non-Compliance Charge has been assessed, then there should be no further penalty.[500]

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[497] IPL Protest at 6.

[498] Midwest TDUs Protest at 35-36.

[499] *Id.* at 36-37.

[500] IPL Protest at 3.

c. MISO February 10 Answer

304. In response to arguments against MISO's proposal to require replacement for any Planning Resource that will be on planned outage or planned derate for more than 31 days in a Season, MISO asserts that an after the fact review of MaxGen Events often shows the significant contribution of planned and maintenance outages to unit unavailability during times of realized LOLE risk—typically from many resources designated to satisfy resource adequacy requirements. MISO states that it originally proposed a requirement that would bar Auction participation for resources that expect to be on outage more than 30 days in a Season, which mirrored the provision added to the Tariff in 2020 that a resource not be on planned outage more than 90 days of the first 120 days of the Planning Year. MISO states that a number of stakeholders sought flexibility in Auction participation and outage planning, opposing the prohibition of participation and instead suggesting a capacity replacement requirement with a corresponding financial penalty, a proposal which MISO adopted from stakeholders.[501]

305. In response to arguments regarding the proposed Capacity Replacement Non-Compliance Charge, MISO states that the Capacity Replacement Non-Compliance Charges is modeled on the GVTC Deferral Non-Compliance Charge that was accepted by the Commission in 2016.[502]

306. MISO disputes COMPP's argument that a threshold of 20 days in each Season or up to 40 days in the Spring and Fall would be reasonable, arguing that MISO has experienced more MaxGen Events in the shoulder Seasons than it has in the Summer and that a 31-day threshold provides a reasonable amount of flexibility in a Season for resources to take needed planned and maintenance outages. In response to IPL's argument that the threshold should be 45 days, MISO asserts that the proposed requirement is 31 days in a Season and that there is no proposed restriction to arbitrarily limit outages from spanning more than one Season, a method which could be used to accommodate longer outages while still incentivizing capacity designated to satisfy resource adequacy requirements in a Season to be available for most of that Season.[503]

307. In response to Midwest TDU's argument that MISO is imposing Capacity Replacement Non-Compliance charges on LSEs, MISO notes that this is only the case when an LSE owns the resource that fails to replace or has obtained contractual rights to the capacity and submitted its ZRCs via a FRAP such that MISO is not settling capacity

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[501] MISO February 10 Answer at 9-10.

[502] *Id.* at 11 (citing *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,094 (2016)).

[503] *Id.* at 12.

charges and credits with the owner of the resource directly. MISO asserts that this is just and reasonable, as the proposed capacity replacement requirement is aligned with the interest of LSEs by helping them demonstrate that they will have access to the capacity needed to meet resource adequacy requirements in line with the one-day-in-10-year reliability planning standard. MISO states that requiring LSEs to pay for the procurement of resources that expect to, or later decide to, become largely unavailable during the Season is inconsistent with the proposed resource adequacy reforms in the SAC filing, which seek to ensure sufficient resources will be available during times of need.[504] MISO further adds that, despite Midwest TDU's assertion that MISO's existing Tariff, which states "ZRC replacement shall have no impact on settlements from the [Auction]," is inconsistent and made confusing with the addition of Capacity Replacement Non-Compliance Charges, the original and enduring meaning of this language is that the settlement of capacity charges and credits will remain with the original Market Participant whose ZRCs are being replaced. MISO states that the financial obligation will not be shifted to a different market participant, where applicable, that registered the uncleared resource used to replace the originally designated resource.[505]

308. MISO states that, in response to comments from Midwest TDUs related to outage modeling in the annual LOLE study, MISO notes that, while the LOLE study does account for historical planned outages, the study largely optimizes their timing to have little impact to LOLE. MISO adds that the study does not account for future resource behavior that deviates from the 5-year historical average used in LOLE. MISO states that the proposed outage provisions, including the exemptions and replacement requirements, further close a gap in the current rules to create incentives for market participants to optimize planned outages and their impacts to reliability and resource adequacy. MISO states that an accredited unit with high historical availability, such as a nuclear unit, can clear in a Season in which it plans to be on a refueling outage and still be relied upon to meet the Reserve Requirements even though it will not be available when needed. MISO states that in such a situation, it is reasonable for the resource not to clear, to fit the outage within the 31-day threshold, or to replace the ZRCs for outage periods exceeding the threshold.[506]

309. Regarding too many resources potentially seeking outages in the Spring and Fall, MISO states that it has shown Reserve Requirement targets tend to be significantly lower than the status quo annual Reserve Requirements that is currently enforced all year. MISO asserts that its analysis has shown that its proposed resource adequacy

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[504] *Id.*

[505] *Id.* at 13.

[506] *Id.*

enhancements will result in lower Reserve Requirements and higher aggregate excess Planning Reserve Margins outside the Summer Season, which should provide significant amounts of uncleared ZRCs for use as replacement capacity where supply is in excess of the capacity needed.[507]

310. In response to concerns about a "double whammy," MISO notes that the Capacity Replacement Non-Compliance Charge applies when a resource designated for resource adequacy submits planned outages greater than 31 days in a Season, thus depriving LSEs from the benefit of the availability procured in the Auction. MISO adds that accreditation impacts for Schedule 53 Resources are about future expectations of resource availability, noting that if the outage is submitted with lengthy notice and if the outage is sufficiently coordinated, then the fact that the resource is not available during a planned outage will not impact accreditation. MISO states that, in contrast, if an outage is submitted with short notice or during a time when too many MW of capacity have already submitted outages, then it is reasonable to consider how the insufficiently coordinated planned outage might help predict future resource availability. MISO argues that it does not propose exemptions for unplanned outages since, by definition, unplanned outages are not timely or coordinated to ensure sufficient Maintenance Margin. Further, MISO notes that resources that have been replaced are not designated for resource adequacy and Schedule 53 has language explicitly excluding those hours in Tier 1 and Tier 2 of the SAC calculations.[508]

311. MISO argues that its proposal does not need to allow a percentage of seasonal capacity to be held in reserve for replacement capacity purposes and would not create an artificial supply shortage. MISO suggests that predetermining a percentage of seasonal capacity to be held in reserve could lead to some Zones in certain Seasons being short capacity and having to pay CONE.[509]

312. MISO states that its proposed Tariff revisions do not violate the rule of reason, nor is a Generation Outage that was not planned but was known or could have been reasonably anticipated at the time of the Auction a term or condition of service that must be included in the Tariff. MISO states that, consistent with Commission precedent, MISO's determination of what entails Generation Outages that were not planned but were known or could have reasonably anticipated are correctly viewed as implementation details that may be properly included in MISO's BPM rather than the Tariff. MISO

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[507] *Id.* at 14-15.

[508] *Id.* at 15-16.

[509] *Id.* at 41.

contends that the rule of reason states that only those provisions significantly affecting rates, terms, and conditions of service must be filed for Commission approval.[510]

313. In response to Midwest TDUs' argument that neither the proposed Tariff language nor MISO's filing explain what criteria the Market Monitor will use to determine whether a resource that has submitted an outage for greater than 31 days of a Season has engaged in physical withholding, MISO states that, while the section referenced by Midwest TDUs, section 64.1.1.g.xi of the Tariff, does not contain the criteria for determining when resources will have been deemed to have engaged in physical withholding, those thresholds are contained elsewhere in Section 64.1.1.1, and there is no reason to include them again in Section 64.1.1.g.xi.[511]

d. Answers to MISO February 10 Answer

314. Entergy argues that MISO's answer did not address its concerns. Entergy states that planned outages provide some contribution towards periods of elevated LOLE risk but argues that MISO has not shown that planned outages exceeding 31 days are a source of higher system risk.[512] Entergy argues that describing nuclear units as "not being available when needed" because of refueling is flawed. Entergy argues that, if a non-nuclear generating unit were to take a 30-day planned outage every Season over a 2-year period it, would be unavailable for 240 days in total and this unit would not be subject to any capacity replacement requirements under MISO's SAC proposal. Entergy then argues that, if a nuclear unit were offline only once over this same 2-year period for a 40-day planned refueling outage, MISO argues that the unit is "not available when needed" and would subject the resource owner to the replacement capacity requirement, even though the unit was available for 200 more days over the 2-year period than the unit in the first example which was not subject to any capacity replacement requirements.[513] Entergy then argues that by conducting inspections and performing maintenance at nuclear plants at the same time as refueling eliminates the need to power down the nuclear plant at other times to perform the same work.[514] Entergy argues that MISO's

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[510] *Id.* at 47 (citing *City of Cleveland*, 773 F.2d at 1376).

[511] *Id.* at 48.

[512] Entergy Answer at 8.

[513] *Id.* at 9.

[514] *Id.* at 9-10.

planned outage proposal is unjust and unreasonable and that MISO has not justified the application of the more-than-31-days proposal to nuclear plants.[515]

315. Midwest TDUs argue that MISO fails to demonstrate the just and reasonableness of its capacity replacement proposal as applied to planned outages.[516] Midwest TDUs assert that MISO's characterization of its proposal as "mirror[ing]" the prohibition of planned outages extending more than 90 of the first 120 days of the Planning Year overlooks that it only applies to extended outages planned for the Summer Season in a resource adequacy construct that is singularly focused on the resources needed during that specific period.[517] Midwest TDUs claim that MISO's proposed 31-day seasonal capacity replacement obligation would significantly burden or penalize shorter planned outages.[518] Midwest TDUs state that MISO's 90-day threshold for banning Summer peak period planned outages highlight the unreasonableness of the 31-day limitation, and that MISO should encourage longer outages that may be necessary to maintain resources in good working order with high availability.[519] Midwest TDUs also argue that MISO's suggestion to schedule longer outages across Seasons creates incentives for scheduling longer outages into the Summer and Winter Seasons to the maximum extent permitted by the Maintenance Margin despite the higher risk, rather than scheduling in other Seasons.[520] According to Midwest TDUs, MISO's suggestion that resources not participate in the Auction for an entire Season if they have a 32-day planned outage artificially reduces the resources MISO can call upon to meet MaxGen Events.[521]

316. Midwest TDUs argue that MISO fails to explain its proposal's inconsistency with the basis for its Planning Reserve Margin and reserve sharing fundamentals.[522] Midwest TDUs assert that the MISO Tariff already considers long outages when establishing Reserve Margins and that MISO fails to demonstrate the need for additional capacity procurement, especially when the LOLE study accounts for historical planned outages by

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[515] *Id.* at 10.

[516] Midwest TDUs Answer at 13.

[517] *Id.* at 14.

[518] *Id.* at 15.

[519] *Id.*

[520] *Id.* at 16 (citing MISO February 10 Answer at 12)

[521] *Id.* at 16-17.

[522] *Id.* at 17.

using a 5-year historical average.[523] Midwest TDUs state that MISO attempts to discount the LOLE study factors by describing the LOLE study as optimizing the timing of planned outages to have little impact on LOLE, but according to Midwest TDUs, MISO fails to account for recent improvements to its LOLE study methodology as well as its obligation to accurately account for planned outages.[524] Midwest TDUs claim that MISO's capacity replacement proposal would require procurement that would produce availability far exceeding the historical availability on which the Reserve Requirement targets are based.[525] Midwest TDUs also state that MISO fails to acknowledge the concern that its capacity replacement proposal effectively eliminates LSEs' benefits of MISO's reserve sharing pool.[526]

317. According to Midwest TDUs, MISO fails to acknowledge concerns that replacement is not a realistic option for planned outages, especially for smaller LSEs.[527] Midwest TDUs assert that MISO also did not address concerns about the potential for exercise of market power in the bilateral market.[528] Midwest TDUs claim that, contrary to MISO's assertion that plenty of replacement capacity will be available outside the Summer Season, MISO's analyses show that securing capacity replacement during non-Summer Seasons will not be easy and that Spring may be very challenging.[529]

318. Midwest TDUs argue that MISO fails to meet its burden that its replacement capacity and related non-compliance charge proposal is just and reasonable.[530] For example, Midwest TDUs state that MISO fails to justify imposing a capacity replacement obligation on unplanned outages greater than 31 days, given the lack of Tariff parameters or procedures governing how the Market Monitor will make a subject determination as to whether an outage could have been reasonably anticipated.[531] Midwest TDUs assert that

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[523] *Id.*

[524] *Id.* at 18.

[525] *Id.* at 19.

[526] *Id.*

[527] *Id.* at 20-21.

[528] *Id.* at 21.

[529] *Id.* at 22.

[530] *Id.* at 24.

[531] *Id.* at 23.

MISO's explanation that such implementation details may be included in the BPMs "flies in the face of the Commission's FPA Section 205 obligation to ensure just and reasonable rates."[532] Midwest TDUs also assert that MISO does not address how applying a capacity replacement obligation "after-the-fact" on such unplanned outages nullifies the opportunity to replace that capacity.[533] Midwest TDUs claim that MISO never explains why an appropriately planned 28-day outage should be subjected to a replacement requirement if the resource incurs a four-day unplanned outage in that same Season.[534] According to Midwest TDUs, MISO's proposal is an unavoidable Capacity Replacement Non-Compliance Charge penalty, even assuming capacity replacement was realistic in the planned outage context.[535]

319. Midwest TDUs argue that MISO's proposed Tariff revisions will not work as intended, and that the Commission should require corrections and clarifications to the Tariff.[536] Regarding the treatment of replacement capacity that has been secured, Midwest TDUs state that MISO fails to clarify the impact on Capacity Replacement Non-Compliance Charges.[537] Midwest TDUs also state that MISO intends to treat a resource that has been replaced as not designated for resource adequacy during that period, however MISO refers to language that excludes resources not designated for resource adequacy from the accreditation calculation, but does not make the connection between such exclusion and successful capacity replacement.[538]

e. Deficiency Letter Response and Responsive Pleadings

320. In response to a question requesting additional support for the Capacity Replacement Non-Compliance penalty value, MISO states that it is appropriate to model the penalty after ICAP Deferral Non-Compliance Charge because a resource that offers

[532] *Id.*

[533] *Id.*

[534] *Id.* at 24.

[535] *Id.*

[536] *Id.*

[537] *Id.* at 25.

[538] *Id.* at 25-26.

and clears capacity for a Season but then chooses not to make it available for much of that Season should forfeit the capacity revenues received.[539]

321. In response to a question regarding the relationship between MISO's proposed Capacity Replacement Non-Compliance Charge and MISO's LOLE studies, MISO states that the results of LOLE studies would largely remain the same as current LOLE studies assume the use of replacement capacity for all outages, not just those over 31 days. MISO states that under its proposal, where a resource clears for a Season but decides to go on planned outage for greater than 31 days in that Season, the obligation to replace or pay a non-compliance charge creates incentives for the Market Participant to provide the availability the resource was otherwise cleared to supply. MISO submits that this helps ensure the Reserve Requirement planning targets are being satisfied.[540]

322. In response to a question regarding whether the Capacity Replacement Non-Compliance Charge may incent withholding resources as a hedge against the penalty, MISO states that it has no intention to disincentivize participation in the bilateral markets. MISO states that it is reasonable to expect that bilateral trading for replacement capacity will be much more robust under the new construct than it is today. MISO adds that its models indicate that the move to seasonal Auctions will result in nearly double the amount of uncleared ZRCs in non-Summer Seasons, providing liquidity to the market for replacement capacity.[541]

323. In response to a question asking MISO to describe the expected methodology that the Market Monitor will employ to determine whether unplanned outages could be reasonably anticipated at the time of the Auction, MISO states that the proposed Tariff language indicates that details necessary to implement the capacity replacement requirement will be included in the Market Monitoring and Mitigation BPM, which MISO believes to be the appropriate place.[542]

324. MISO's Deficiency Letter Response clarifies that the availability of replacement resources does not contribute to the SAC value for the replaced resource but does contribute to the Tier 1 and Tier 2 SAC value of the replacement resource. MISO states that Schedule 53 only considers offers during times when a resource was designated for

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[539] MISO Deficiency Letter Response at 27.

[540] *Id.*

[541] *Id.* at 27-28.

[542] *Id.* at 29.

resource adequacy, and when a resource is replaced it is no longer designated for resource adequacy as that obligation has been transferred to the replacement resource.[543]

325. Midwest TDUs argue that MISO has not provided sufficient clarity that resources designated for RAR but later replaced are considered by MISO as not designated for RAR. Midwest TDUs argue that this ambiguity is amplified by other confusing Tariff language related to capacity replacement. Midwest TDUs state that Tariff language suggesting that ZRC replacement shall have no impact on settlements from the Auction and FRAP, including any Capacity Replacement Non-Compliance Charge suggests that capacity replacement may not protect a resource on a greater than 31-day outage from Capacity Replacement Non-Compliance Charges. Midwest TDUs state that it is not reasonable to include Tariff language regarding the effect of capacity replacement on Capacity Replacement Non-Compliance Charges that can be read in a manner contrary to other proposed language.[544]

326. Midwest TDUs suggest that MISO's Deficiency Letter Response reinforces concerns about the practicality and consequences of MISO's proposed capacity replacement provisions. Midwest TDUs argue that MISO's proposal may incent resources to not offer excess ZRCs into the bilateral market as a hedge against the penalty. Midwest TDUs argue that MISO has provided no evidence that today's limited, non-transparent bilateral market will become robust and therefore make capacity replacement feasible.[545]

327. Midwest TDUs argue that MISO has provided no guidance on how it would have the Market Monitor make the determination that an unplanned outage could have reasonably been anticipated at the time of the Auction. Midwest TDUs allege that MISO fails to explain why broad considerations for such a determination are not included in the Tariff and instead simply asserts that it believes the BPM to be the appropriate place. Midwest TDUs contend that MISO's unsupported belief cannot trump the FPA and well-established Commission policies.[546] Duke Energy further requests that the Commission direct MISO to document, prior to the next outage, how the Market Monitor will determine whether unplanned outages could have been reasonably anticipated at the time of the Auction. Duke Energy submits that it is imperative that market participants understand in advance of the auction how reasonably anticipated unplanned outages will

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[543] *Id.*

[544] Midwest TDUs Response to MISO Deficiency Letter Response at 15.

[545] *Id.* at 16-20.

[546] *Id.* at 23 (citing *Midwest Indep. Transmission Sys. Operator, Inc.,* 106 FERC ¶ 61,251, at P 89 (2004)).

be determined, yet MISO makes no commitment as to the timing of the stakeholder process to clarify this important detail.[547]

328. Midwest TDUs state that MISO's response on the relationship between LOLE studies and the Capacity Replacement Non-Compliance provision demonstrates that MISO is not proposing to change the LOLE analysis to account for its new requirement. Midwest TDUs add that MISO's response suggests that it conducts its current LOLE studies on the assumption that all capacity will be replaced, meaning, according to Midwest TDUs, that MISO's current LOLE analysis somehow simulates the case in which capacity beyond the Planning Reserve Margin is available to backfill any outages, even though that capacity is not committed to do so. Midwest TDUs submits that MISO's response makes it unclear whether its LOLE studies are appropriately determining the Planning Reserve Margins needed to achieve MISO's reliability targets.[548] Midwest TDUs state that, if MISO's response is accurate, it would suggest that MISO has been mismanaging its resource adequacy construct because it has failed to require the capacity replacement that is presumed in the LOLE analysis, which in turn determines the Reserve Margin. Midwest TDUs state that it logically cannot be the case that the current LOLE analysis formulation yields the correct Planning Reserve Margin under both: (1) its current Tariff, in which no capacity replacement obligation is imposed for any planned or unplanned outages; and (2) its proposed Tariff, in which capacity replacement is required for a subset of outages. Midwest TDUs concludes that as a result, MISO's description of its LOLE process cannot support the justness and reasonableness of its capacity replacement proposal.[549]

329. Entergy argues that the Capacity Replacement Non-Compliance Charge creates incentives for market participants to not offer excess capacity into the bilateral capacity market to ensure they have a hedge against the risk that an extended outage could subject their own resources to the Capacity Replacement Non-Compliance Charge. Entergy states that the end result could be a very weak bilateral capacity replacement market, making it difficult for market participants to shore up capacity, leaving some generators with no choice but to pay the Capacity Replacement Non-Compliance Charge.[550]

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[547] Duke Energy Response to MISO Deficiency Letter Response at 3.

[548] Midwest TDUs Response to MISO Deficiency Letter Response at 25-26.

[549] *Id.* at 26.

[550] Entergy Response to MISO Deficiency Letter Response at 7-8.

f. MISO May 20 Answer to Responsive Pleadings

330. MISO states that it provided support that its capacity replacement obligation improves resource adequacy while setting Reserve Requirement targets specific to each Season which are expected to increase the amount of uncleared ZRCs that can be used for replacement in most Seasons and locations. MISO states that where uncleared ZRCs are not available, it is even more important that capacity designated for resource adequacy not be unavailable for greater than 31 days in a Season for reasons that can be controlled. MISO states that the capacity replacement obligation is not only feasible, it exists and is required under the current Tariff for suspended and retired units and is an option for units that suffer a catastrophic outage.[551]

331. MISO states that it has established its Capacity Replacement Non-Compliance charge as just and reasonable. MISO explains that this charge was requested by the Market Monitor to disincentivize ZRC offers from resources that were not expected to be available for a significant portion of the Season. MISO states that requiring LSEs to pay for the procurement of resources that expect to, or later decide to, become largely unavailable during the Season is inconsistent with the proposed resource adequacy reforms in the filing.[552]

332. MISO states that it has worked with the Market Monitor to draft language that will be included in the BPM for Market Monitoring and Mitigation that addresses the application of capacity replacement obligations to unplanned outages. MISO states that the language is intended to protect against ZRCs being offered that are not reasonably expected to be available. MISO states that the proposed language will be added to section 5.15 of the BPM and reads:

> Resources that clear in a given [Auction], and subsequently are in full or partial unplanned (i.e., urgent, emergency, or forced) outages or derates below their commitment amount for more than 31 days in a Season and were not replaced with uncleared ZRCs must submit documentation of such circumstances to the [Market Monitor]. [Market Monitor] review of the documentation seeks to determine if the outage/derate durations could have been reasonably expected at the time of the closing of the [Auction]. If the outage/derate durations in the judgement of the [Market Monitor] could have been reasonably expected, a Capacity Replacement Non-Compliance Charge may be assessed by the

[551] MISO May 20 Answer at 11-12.

[552] *Id.* at 14-15.

> Transmission Provider pursuant to the Tariff. This provision applies to changes in equipment status, operation limitations and/or resource reliability known prior to the closing of the [Auction] window but are too recent to be captured in the last three (3) years of history of the applicable Season used in the Seasonal Accredited Capacity Calculations. One example of such a case would be a participant who offered and cleared a generation resource in the [Auction] for the summer season despite knowing that the generator would be unavailable to that offer amount for most of the summer after suffering a substantial or even catastrophic outage or derate prior to the closing of the [Auction] window.
>
> If prior to the [Auction], a Market Participant does not have a reasonable expectation that outages or derates will be less than 32 days in the Season, it can request an exemption of the capacity in question per the Tariff (Section 66.1.1.g.xi) and not include it in a ZRC transaction or FRAP, and not offer it into the [Auction].

MISO states that it believes this level of implementation detail is appropriately included in the BPM.[553]

g. Midwest TDUs June 6 Answer

333. Midwest TDUs argue that MISO's May 20 Answer does not justify requiring capacity replacement in situations where outages exceed the 31-day threshold due to, in whole or in part, unplanned outages deemed reasonably anticipatable. Midwest TDUs further contend that MISO's May 20 Answer reinforces the filing's fundamental failure to provide any criteria or process governing the Market Monitor's rate-critical determination as to whether an unplanned outage could have been reasonably anticipated. Midwest TDUs argue that, as an initial matter, the draft BPM language provided by MISO belongs in the Tariff, rather than a BPM, because it directly affects rates. Midwest TDUs further argue that the draft language provides no methodology or even broad considerations governing how the Market Monitor is to determine whether an outage could have been reasonably anticipated, instead leaving that determination to the judgment of the Market Monitor. Midwest TDUs contend that the language therefore provides no guidance whatsoever on how the Market Monitor will determine if an

[553] *Id.* at 17-18.

unplanned outage could have been reasonably been anticipated at the time of the Auction.[554]

h. Commission Determination

334. We find MISO's proposed Capacity Replacement Non-Compliance Charge to be just, reasonable, and not unduly discriminatory or preferential. MISO's proposed capacity replacement provisions reflect a reasonable expectation that a Planning Resource receiving capacity payments for a given Season should not be unavailable for a significant portion of that Season. In the 2020 Summer Outage Order, the Commission noted that MISO's Tariff did not, at the time, contemplate consequences for resources that clear the Auction but expected to be unavailable. The Commission found MISO's proposal to preclude resources that are unavailable for 90 days or more of the first 120 days in the Planning Year from participation in the Auction or in a FRAP as a just and reasonable method to ensure that resources do not clear the Auction, receive capacity payments, and are subsequently unavailable for the majority of the Summer, which is MISO's highest risk period.[555] We find that MISO's proposal builds on the provisions accepted by the Commission in the 2020 Summer Outage Order by requiring Planning Resources that will be on a planned outage or derate for more than 31 days in a Season to either not offer into that Season's Auction or to procure replacement capacity for days beyond the 31-day threshold.

335. We find that MISO has demonstrated that the 31-day threshold in a given Season is reasonable. While we recognize that other thresholds could also be just and reasonable, we find that MISO's proposed 31-day threshold appropriately balances providing flexibility to resource owners to plan needed and prudent maintenance and/or requiring a minimum amount of expected future availability to receive capacity payments in a given Season. We also find that MISO has demonstrated that the 31-day threshold reasonably ensures LSEs are receiving the benefits of those resources in the Seasons for which they were procured.

336. We are not persuaded that more time is needed to accommodate resource-owning LSEs. Market participants have had 17 months from the time of the filing to assess the impact of MISO's filing on their business and operating decisions. We find MISO TOs' argument that it is unclear whether market participants will "reserve" capacity for replacement or rely on the capacity market, which may be short, to be speculative. Mitigation provisions that require unused capacity to be offered into the Auction at an economic price prevent such concerns. The only "reserving" would be limited to resources that did not clear in the Auction or external resources, both of which resource

[554] Midwest TDUs June 6 Answer at 6-8.

[555] *See* 2020 Summer Outage Order, 170 FERC ¶ 61,066 at P 37.

owners have always had wide latitude to decide how to use. Similarly, MISO TOs have not demonstrated that it is necessary to allow market participants to incorporate the risk of replacement capacity within their capacity market without being treated as withholding. Doing so would circumvent physical withholding thresholds, would raise market power concerns, and would reduce the amount of resources offered into the Auction, potentially affecting both Auction prices and resource adequacy.

337. Protestors contend that it may be difficult for resource owners to find replacement ZRCs to cover a short time period. As an initial matter, we agree with MISO that, under its proposal, Reserve Requirements will generally be lower in non-Summer Seasons, meaning that resource owners are likely to have excess ZRCs for those Seasons that they are willing to sell as replacement capacity. Moreover, we note that the capacity replacement provisions provide additional flexibility to resource owners that will allow a resource to go on outage for more than 31 days without penalty, if they are able to replace those ZRCs for the time period beyond the 31-day threshold. To the extent that a resource owner believes that it may be unable to find replacement ZRCs for an outage that exceeds 31 days in a Season, the optimal choice for that resource owner may be to forego participation in capacity Auction for that Season. Similarly, we are unpersuaded that MISO's proposal creates market power concerns in bilateral markets to purchase replacement capacity. LSEs have long used bilateral agreements to acquire capacity, including replacement capacity, under MISO's current construct, and nothing in the record indicates that such bilateral contracting will be unavailable during the planning year for capacity replacement for resources on outages exceeding 31 days in a Season.[556]

338. We disagree with arguments that suggest that, if a planned outage receives an exemption for purposes of accreditation, it is unreasonable to penalize that resource if it remains on outage for more than 31 days. We agree with MISO that it is unreasonable for an LSE to be burdened with the full cost of procuring capacity if that Capacity Resource is expected to be, or otherwise becomes, unavailable for more than 31 days in a Season, even if that time period occurs in a period with relatively low reliability risks.

339. Some protestors suggest that restricting a planned outage to 31 days may limit efficiencies gained by longer maintenance periods, leading to increased costs. Although we recognize that resources may vary in their maintenance patterns, we find that MISO's proposal appropriately balances the need for flexibility with the need to ensure that a resource is available for a Season to which it commits. We further find that MISO's capacity replacement provisions afford resource owners sufficient flexibility, as it permits

[556] Currently, Planning Resources with cleared ZRCs that retire, suspend, or are otherwise unable to meet the performance requirements applicable to the Planning Resource must replace the cleared ZRCs with uncleared ZRCs. *See* MISO, FERC Electric Tariff, § 69A.3.1.h (38.0.0).

them to determine whether it is more cost effective to: (1) perform necessary maintenance within the 31-day period; (2) opt out of participating in the capacity market for a Season and perform maintenance over the course of that Season; or (3) perform maintenance for a period longer than 31 days and procure replacement ZRCs for the time period beyond the 31-day threshold. In addition, we note that MISO's proposal permits a resource owner to schedule maintenance straddling two Seasons, which would allow for a resource be on a 62-day outage while still participating fully in both Seasons. This may be particularly useful for resources with longer maintenance periods that are planned far in advance. Similarly, we do not find that MISO's capacity replacement provision unduly discriminates against particular resource types. To the extent that certain resource types require maintenance periods beyond 31 days, we find that it is appropriate for resource owners to determine which option is best for those particular units.

340. We find that it is appropriate for a resource on a planned outage that has not received an exemption that lasts more than 31 days in a Season to both trigger the Capacity Replacement Non-Compliance Charge and to receive a reduction to its capacity accreditation. The proposed Capacity Replacement Non-Compliance Charge and MISO's proposed accreditation exemptions for planned outages serve distinct purposes. As MISO explains, while the capacity replacement provisions are intended to ensure that a resource expected to be unavailable for a significant portion of a Season does not participate in the capacity markets absent the procurement of replacement capacity, MISO's SAC provisions value resources based on their historical availability. We find that it is reasonable to exempt resources that follow MISO's planned outage requirements and receive a Tier 2 exemption from accreditation reductions because there is no reason for that outage to affect future expectations of availability. In contrast, should a resource experience an unplanned outage that lasts longer than 31 days in a Season, it is reasonable for MISO to require that resource to replace the capacity that it is receiving payments for, and, because the outage is unplanned and uncoordinated with MISO, for MISO to adjust its expectations of that resource's future availability and thus reduce its accreditation accordingly.

341. We are not persuaded by Entergy Coalition's argument that MISO's proposal could create additional risks of supply shortfalls. To the contrary, we find that MISO's proposal will help to increase supply availability certainty. Under MISO's current provisions, some Capacity Resources can clear the Auction and receive capacity payments for the entire year even if they expect to be unavailable for 89 days in the Summer. For these units, the capacity payments they receive may not accurately reflect reliability contribution that they bring to MISO. Under MISO's proposal, all market participants will have additional confidence that Capacity Resources that clear the Auction expect to be available for at least 66% of each Season. While this could potentially result in a lower amount of capacity being available to offer into the Auction, we believe that it is critical that MISO be able to depend on such resources, even if such dependability corresponds with fewer resources available for the Auction or FRAPs.

342. We do not find MISO's proposed Tariff language regarding settlements to be inconsistent. As MISO explains, this language explains that the settlement of capacity charges and credits will remain with the original market participants whose ZRCs are being replaced, and that the financial obligation will not be shifted to a different market participant that registered uncleared ZRCs to replace the original Capacity Resource.

343. We disagree that MISO's Tariff should provide further detail regarding MISO's determination as to whether an outage could have been reasonably anticipated. We find, similar to our discussion regarding the "rule of reason" in the above section, that these determinations are implementation details that may be included in the BPM and are consistent with the level of detail of other areas that are found in MISO's Tariff where MISO or Market Monitor has discretion.[557]

4. Stakeholder Engagement

a. MISO Filing

344. MISO states that it has proactively engaged with its stakeholders to develop the proposal and mitigate its resource adequacy challenges.[558] MISO states that stakeholders have passed three motions for MISO to delay the filling, citing the need for additional time to understand MISO's proposal. MISO states that, in response, MISO provided stakeholders with an additional two months to continue discussions. MISO further states that it has modified its proposal in response to stakeholder feedback, including: (1) implementing a transition period to the full 80% Tier 2 weighting; (2) adopting the UCAP/ISAC ratio; and (3) including Auction Clearing Price adjustments during rare circumstances. MISO states that its proposal reasonably accommodates concerns raised in the stakeholder process.[559]

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[557] *See, e.g.,* MISO, FERC Electric Tariff, Module D, § 64.2.2 (31.0.0) ("Pending the development of the capability to use the market models, the [Market Monitor] shall determine the effect on prices of questioned conduct using the best available data and such models and methods, as it shall deem appropriate."); *see also* MISO, FERC Electric Tariff, Module D § 64.1.4.h (65.0.0) ("If cost data or other information submitted by a Market Participant indicates to the satisfaction of the [Market Monitor] that the Reference Levels for that Market Participant should be changed, revised Reference Levels shall be determined, communicated to the Market Participant, and implemented, as soon as practicable.").

[558] MISO Transmittal at 6.

[559] *Id.* at 22-23.

b. Comments and Protests

345. Manitoba Hydro asserts that MISO has made concerted and lengthy efforts to address stakeholder concerns and made several improvements to its original proposal.[560] However, some protestors argue that MISO's proposal is not just and reasonable because MISO did not adequately address stakeholder concerns. The Mississippi Commission contends that MISO has not incorporated stakeholder feedback in its White Papers, and that MISO will use its unvetted White Papers to justify future steps to address a problem that may not exist.[561] According to the Mississippi Commission, MISO has not proactively engaged with stakeholders and MISO has routinely ignored or marginalized concerns raised with the SAC proposal.[562] The Mississippi Commission states that Order No. 719 established four criteria—(1) inclusiveness; (2) fairness in balancing diverse interests; (3) representation of minority interests; and (4) ongoing responsiveness—intended to "balance customers' and other stakeholders' need for effective access to the boards of RTOs and ISOs, with the need for the independent management of each RTO and ISO."[563] The Mississippi Commission argues that MISO ignored stakeholder feedback; therefore, MISO's SAC proposal violates Order No. 719.[564]

346. DTE Electric claims that the proposal was challenged extensively in stakeholder meetings with minimal response from MISO to valid concerns.[565] East Texas states that MISO stakeholders had to evaluate a significant new resource adequacy construct where the details of the proposal were in considerable flux until shortly before this filing was submitted, and, because of this, MISO's proposal still poses a number of conceptual and operational concerns. According to East Texas, nor did MISO provide all of the relevant information to stakeholders so they could scrutinize it and ensure that it would garner the desired benefits.[566] East Texas adds that market participants have not reliably assessed its intended or unintended consequences, let alone the potential cost of those consequences.

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[560] Manitoba Hydro Comments at 3.

[561] Mississippi Commission Protest at 9.

[562] *Id*.

[563] *Id*. at 29 (citing *Wholesale Competition in Regions with Organized Elec. Mkts.,* Order No. 719, 125 FERC ¶ 61,071 (2008), *order on reh'g*, Order No. 719-A, 128 FERC ¶ 61,059, *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009)).

[564] *Id*.

[565] DTE Electric Protest at 3.

[566] East Texas Protest at 3.

East Texas asserts that the fundamental problem is that one cannot presently grasp what repercussions MISO's various changes will have on its capacity market, and thus, MISO is unable to establish that its proposal is just and reasonable under section 205 of the FPA.[567]

347. Industrial Customers assert that MISO failed to consider a reasonable modification to MISO's proposal presented by Industrial Customers in the MISO stakeholder process. Industrial Customers state that, within the MISO stakeholder process, they participated in joint End-Use Sector comments to MISO pointing out the same concerns with MISO's proposal that they raise in their protest. Industrial Customers assert that they offered a constructive solution that would allow MISO to move forward with its proposed seasonal allowed calls on LMRs without violating 10 calls per Planning Year, but MISO ignored their suggestion. Industrial Customers argue that MISO's failure to reasonably consider stakeholder feedback (that would have allowed MISO to move forward with the underlying objectives in its proposal) is another reason to reject MISO's proposal in this proceeding.[568]

c. MISO February 10 Answer

348. MISO contends that its filing reflects substantial engagement with stakeholders over the last several years and particularly in 2021, noting that it conducted six workshops, in addition to monthly RASC meetings, in May, August, September, October, and November of 2021. MISO further contends that the proposal was modified in several areas compared to the original proposal based on stakeholder discussions, including: rules related to Auction participation, outage exemptions, converting SAC to UCAP, including offered availability in all hours, and transition provisions, which provide stakeholders three years from the requested effective date to adjust to the proposal.[569]

349. MISO argues that the Commission should dismiss arguments suggesting that MISO violated Commission policy by ignoring stakeholder feedback. MISO argues that nothing in Order No. 719 requires MISO or any other RTO/ISO to implement or take action on any and all issues raised during the stakeholder feedback process. MISO contends that despite the Mississippi Commission's claim that MISO ignored stakeholder feedback, MISO has responded to more than 150 questions, comments, and requests in its Q&A document, held a multitude of stakeholder meetings specifically focused on addressing stakeholder questions and feedback, and has provided a forum for

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[567] *Id.*

[568] Industrial Customers Protest at 11-12.

[569] MISO February 10 Answer at 6-7.

stakeholders to provide comments directly to the MISO Board of Directors on multiple occasions.[570]

d. Answers to MISO February 10 Answer

350. WEC Utilities argues that MISO is misleading when using the number of stakeholder meetings as evidence that further stakeholder engagement is not necessary when this is instead evidence of the level of complexity of the proposal and transition.[571] WEC Utilities states that several stakeholder identified issues remain unresolved.[572] WEC Utilities claims that MISO exaggerated the ability of stakeholders to discuss the proposal with the Board of Directors, asserting that such opportunities were limited to public comment periods that did not allow for a constructive dialogue.[573]

351. The Mississippi Commission claims that there was near unanimous opposition to MISO moving forward with the SAC proposal, including four motions against advancing that were approved by stakeholders in the RASC.[574] The Mississippi Commission further contends that MISO focuses on form over function in the stakeholder process.[575] The Mississippi Commission asserts that MISO inaccurately characterizes how their concerns were addressed and notes that they were not presented with any detail to the Board of Directors in a public meeting in 2021.[576] The Mississippi Commission cites the statement in MISO's February 10 Answer that additional stakeholder engagement is necessary prior to implementing the SAC proposal as evidence that the proposal was incomplete.[577]

e. Commission Determination

352. We are not persuaded by protestor arguments that MISO's proposal fails to adequately consider stakeholder concerns expressed in the stakeholder process, as

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[570] *Id.* at 49-50.

[571] WEC Utilities Answer at 2-3.

[572] *Id.* at 3.

[573] *Id.*

[574] Mississippi Commission Answer at 2.

[575] *Id.* at 3.

[576] *Id.* at 3-4.

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

required by Order No. 719. In Order No. 719, the Commission adopted the proposed rule to require each RTO or ISO to increase its responsiveness to the needs of customers and other stakeholders.[578] In particular, the Commission found that RTOs and ISOs must provide an avenue for customers and other stakeholders to present their views on RTO and ISO decision-making and to have those views considered.[579] Here, we find that MISO's stakeholder process satisfied those requirements of Order No. 719 with respect to the instant proposal. MISO has worked with stakeholders on the proposal for several years, holding numerous meetings since at least March 2020. Stakeholders have been on notice of the proposed Tariff changes since November 30, 2021, thus giving them nearly 17 months to prepare for the 2023/2024 Auction in the Spring of 2023. Moreover, MISO incorporated some stakeholders' suggestions into the eventual proposal. In addition, with respect to MISO's statement that additional stakeholder engagement is necessary prior to implementation of the proposal, we do not consider that to be a flaw in the stakeholder process that renders the proposal unjust and unreasonable.

5. Other Comments

a. Comments

353. Joint Commenters submitted comments attaching their comments on MISO's MCO Filing. In their comments on MISO's MCO Filing, Joint Commenters argue that MISO failed to adequately evaluate the effects of the 50% threshold or the 50 MW exemption and that such failure becomes even more significant when one considers the impact of the 31-day replacement capacity requirement in MISO's availability-based resource accreditation proposal. Joint Commenters also express concern that the relationship between the MCO Filing and the instant seasonal construct filing will produce costly unintended consequences that were not adequately evaluated by MISO. Joint Commenters express concern that these changes will lead to increased costs for LSEs without a tangible increase in reliability.[580]

354. MidAmerican is concerned that the policies contained in MISO's proposal do not have corresponding market commitment changes that will allow MidAmerican to be successful under the new paradigm. MidAmerican contends that MISO needs to further improve its forecasting tools and market clearing processes in order to effectively stage generators for real-time operations in advance of potential weather events or capacity shortfalls. MidAmerican argues that, with the increased penetration of intermittent

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[578] Order No. 719, 125 FERC ¶ 61,071 at PP 481, 502.

[579] *Id.* P 503.

[580] Joint Commenters Comments, attach. A (citing Joint Commenters' Comments in Docket No. ER22-496-000 (filed Jan. 14, 2022)).

resources, MISO must recognize that solving for these increasing levels of forecast error in the real-time market will become increasingly difficult and will need to be managed on a day ahead basis. MidAmerican contends that, without additional consideration for day-ahead forecast uncertainty, the number of resources MISO will need to call on in the real-time market will increase, further putting pressure on the intraday gas market and gas storage capability, and, ultimately, penalizing resources for their inability to acquire the necessary fuel due to the limited time frame in which MISO is attempting to dispatch a large number of resources.[581]

355. COMPP agrees with MISO that capacity market reform is necessary but argues that MISO has failed to demonstrate that the proposed Tariff changes will be sufficient to solve MISO's ongoing reliability problems. COMPP avers that MISO's revisions have not been shown to be just and reasonable and, if the Commission does not reject the proposal, it should hold a technical conference on the shortfalls of MISO's capacity market to establish a record.[582] Specifically, COMPP argues that MISO's proposal does not include mechanisms to measurably improve resource performance.

356. COMPP argues that, as it argues in the MISO MCO proceeding in Docket No. ER22-495-000, a sloped demand curve in the seasonal Auction would provide the economic signals and winterization incentives MISO needs. COMPP contends that the Market Monitor has found that the Auction has not produced meaningful prices that reflect the actual marginal value of reliability. COMPP requests the Commission to direct MISO to make a subsequent filing implementing a downward sloping demand curve and/or explore the implementation of a sloped demand curve in a larger technical conference covering MISO Resource Adequacy issues.[583]

b. Commission Determination

357. We reject these protests. First, we note that, concurrently with this order, we are issuing an order rejecting MISO's MCO Filing.[584] Second, while MidAmerican raises concerns that MISO needs to update its market commitment tools and processes, MidAmerican does not provide any specific evidence to suggest that MISO's proposal is unjust and unreasonable absent those updates. Because we are accepting MISO's instant proposal, we reject COMPP's request to institute a technical conference on MISO's capacity reforms. Finally, we find that COMPP's request for the Commission to direct

[581] MidAmerican Protest at 3.

[582] COMPP Protest at 2.

[583] *Id.* at 17-19.

[584] *Midcontinent Indep. Sys. Operator, Inc.*, 180 FERC ¶ 61,142.

MISO to make a subsequent filing to institute a downward sloping demand curve and/or explore the implementation of a sloped demand curve in a technical conference is beyond the scope of the instant filing.[585]

The Commission orders:

(A) MISO's Filing is hereby accepted, effective September 1, 2022, as requested, subject to condition, as discussed in the body of this order.

(B) MISO is hereby directed to submit a compliance filing within 30 days of this order, as discussed in the body of this order.

(C) MISO is hereby directed to submit an informational report within 90 days of the conclusion of the 2025/2026 Planning Year, as discussed in the body of this order.

By the Commission. Commissioner Danly is concurring with a separate statement attached.
Commissioner Clements is dissenting with a separate statement attached.
Commissioner Christie is concurring with a separate statement attached.

(S E A L)

Debbie-Anne A. Reese,
Deputy Secretary.

[585] *See, e.g.*, *Qualifying Facility Rates & Requirements; Implementation Issues Under the Publ. Util. Regul. Policies Act of 1978*, Order No. 872, 172 FERC ¶ 61,041, at PP 202, 524, 568, 594, 596 (denying requests for Commission actions as beyond the scope of the proceeding), *order on reh'g*, Order No. 872-A, 173 FERC ¶ 61,158 (2020). *See also, e.g.*, *PJM Interconnection, L.L.C.*, 146 FERC ¶ 61,127, at P 26 (2014) (in finding the protestors' argument beyond the scope of the proceeding, the Commission held that while the protestors' recommended revisions to the applicants' filing might have been an improvement, the existing proposal was not unjust, unreasonable or unduly discriminatory without them).

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Midcontinent Independent System Operator, Inc. Docket Nos. ER22-495-000
ER22-495-001

(Issued August 31, 2022)

DANLY, Commissioner, *concurring*:

1. I join the Commission's decision to accept Midcontinent Independent System Operator, Inc.'s (MISO) proposed tariff revisions, effective September 1, 2022, subject to condition.[1] As an initial matter, I agree with MISO that changes are needed to its resource adequacy construct in light of "[t]he MISO Region . . . experiencing significant shifts in generation resource retirement, increased reliance on intermittent resources, significant weather events with correlated generator outages, and declining excess reserve margins."[2]

2. I have become increasingly concerned by MISO's ever-decreasing excess reserve margins[3] and MISO's apparent inability to retain sufficient dispatchable generation to

[1] *See Midcontinent Indep. Sys. Operator, Inc.*, 180 FERC ¶ 61,141 (2022).

[2] Transmittal at 2.

[3] *See 2022 Summer Reliability Assessment*, N. Am. Elec. Reliability Corp., at 4 (May 2022), https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2022.pdf ("Midcontinent ISO (MISO) faces a capacity shortfall in its North and Central areas, resulting in high risk of energy emergencies during peak summer conditions."); *id*. ("Capacity shortfall projections reported in the *2021 [Long-Term Reliability Assessment (LTRA)]* and as far back as the *2018 LTRA* have continued. Load serving entities in 4 of 11 zones entered the annual planning resource auction (PRA) in April 2022 without enough owned or contracted capacity to cover their requirements."); *id*. ("More extreme temperatures, higher generation outages, or low wind conditions expose the MISO North and Central areas to higher risk of temporary operator-initiated load shedding to maintain system reliability."); *id*. at 15 ("Tighter than normal operating conditions are anticipated, particularly in the MISO North/Central region[s], which cleared too little capacity in the 2022–2023 PRA. The PRA capacity shortfall of 1,230 MW signals a potential for operating risk during peak summer conditions."); *id*. ("Expected resources do not meet operating reserve requirements under normal peak-demand and outage scenarios.").

ensure reliability and resource adequacy. MISO's interconnection queue, which is composed almost entirely of intermittent generation,[4] shows that MISO is unlikely to obtain much more dispatchable generation any time soon. Right now, the combined effects of the market's price signals and the state and federal policies under which the market must operate has brought MISO to the point where the total quantity of nameplate capacity is rising, but the quantity of accredited capacity is decreasing.[5] This is a problem that should not be ignored, and the need for dispatchable generation cannot be overstated.[6] A market's failure to procure sufficient capacity with the needed characteristics is a flaw so fundamental that it calls the justness and reasonableness of a market's resulting rates into question. Perhaps, given this systemic failure, Vistra Corp. was correct in describing MISO's capacity market as "irreparably dysfunctional."[7]

3. And perhaps the Commission should consider action pursuant to Federal Power Act section 206.[8] While I think that further action is needed, even with the Commission's approval of this proposal, to address the reliability and resource adequacy

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[4] *See Managing Reliability Risk in the MISO Footprint*, MISO, at 8 (June 16, 2022), https://cdn.misoenergy.org/20220616%20Board%20of%20Directors%20Item%2008a%20Reliability%20Imperative625168.pdf.

[5] *See id.* at 5.

[6] *See 2021 State of the Market Report for the MISO Electricity Markets*, Potomac Economics (The Independent Market Monitor for MISO), at 22 (June 2022), https://www.potomaceconomics.com/wp-content/uploads/2022/06/2021-MISO-SOM_Report_Body_Final.pdf (explaining "the importance of having sufficient dispatchable resources available to satisfy the system demands when intermittent generation is not available").

[7] *Vistra Accelerates Pivot to Invest in Clean Energy and Combat Climate Change*, Vistra Corp., https://investor.vistracorp.com/2020-09-29-Vistra-Accelerates-Pivot-to-Invest-in-Clean-Energy-and-Combat-Climate-Change (Sept. 29, 2020) (announcing that Vistra Corp. "expects to retire seven Luminant power plants, of which the company owns a combined capacity of more than 6,800 MW, between 2022 and 2027," explaining that "[t]hese plants, especially those operating in the irreparably dysfunctional MISO market, remain economically challenged"); *see also* Edward Klump, E&E News, *Vistra touts major zero-carbon push as it unplugs coal*, E&E News (Sept. 30, 2020), https://www.eenews.net/articles/vistra-touts-major-zero-carbon-push-as-it-unplugs-coal/ ("Vistra pointed to a number of issues, including what it called a systematic failure of the MISO capacity market to provide Illinois power plants with adequate revenues.").

[8] 16 U.S.C. § 824e.

risks faced by the MISO region, MISO's decision to establish a seasonal resource adequacy construct is a just and reasonable step in the right direction to mitigate the effects on reliability of MISO's increasing reliance on intermittent generation and the decreasing excess reserve margins. And the question before the Commission is not whether there are other changes that should be made to MISO's construct, or whether this proposal is better than MISO's existing tariff; rather, the question is whether MISO has demonstrated that this proposal is just and reasonable[9]—which indeed it has.

For these reasons, I respectfully concur.

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James P. Danly
Commissioner

[9] *See Neb. Pub. Power Dist. v. FERC*, 957 F.3d 932, 943 (8th Cir. 2020) (recognizing that "courts have made it clear that FERC 'restricts itself to evaluating the confined proposal'" and "[t]herefore, FERC 'need only find the *proposed* rates to be just and reasonable.'") (citations omitted); *Advanced Energy Mgmt. All. v. FERC*, 860 F.3d 656, 662 (D.C. Cir. 2017) ("When acting on a public utility's rate filing under section 205, the Commission undertakes 'an essentially passive and reactive role' and restricts itself to evaluating the confined proposal.") (quoting *City of Winnfield v. FERC*, 744 F.2d 871, 875-76 (D.C. Cir. 1984)).

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ER22-495-001

(Issued August 31, 2022)

CLEMENTS, Commissioner, *dissenting*:

1. I dissent from today's order accepting a suite of resource adequacy reforms filed by Midcontinent Independent System Operator (MISO) because I cannot conclude they will yield just and reasonable rates for capacity in the region. While I agree that reforms are needed, I believe critical design details of MISO's proposal are flawed such that capacity may not be accredited consistent with its availability during times of greatest reliability risk. In addition, MISO's support for its proposed mitigation revisions contains an inconsistency that I fear could provide a loophole for excessive customer costs.

2. Because MISO's proposal addresses reliability risks present in the current tariff and offers the potential to better align capacity payments with services provided, I would have rejected MISO's filing with specific guidance and given MISO the opportunity to expeditiously re-file with necessary revisions. I note, however, that MISO's chosen path to a seasonal construct, the Seasonal Accredited Capacity (SAC) methodology, is not well aligned with the Expected Load Carrying Capability (ELCC) methodology it currently uses for calculating the seasonal accreditation of wind resources and plans to use for solar resources. As MISO takes next steps beyond the market changes proposed herein, I urge MISO to rethink this misalignment and provide a more consistent framework that fairly credits all resource types.

3. I have spoken publicly about the need for the Commission to focus on emerging reliability challenges driven by the changing resource mix and increasing extreme weather and to show leadership in fostering market-based solutions to those challenges.[1] The wind, solar, storage, and hybrid resources entering the market have different operating characteristics and capabilities than the thermal resources that have dominated the electric system for decades. Many of those thermal resources are also retiring, adding to the pace of generation fleet change. At the same time, extreme weather events are

[1] *See, e.g.*, July 2022 Commission Meeting: Opening Remarks of Commissioner Allison Clements, available at www.ferc.gov/news-events/news/july-2022-commission-meeting-opening-remarks-commissioner-allison-clements.

becoming more frequent, disrupting fuel delivery systems, stressing generator performance, and causing correlated generator outages.[2] With these factors converging, it comes as no surprise that the services, attributes, and resource performance required to maintain grid reliability are also changing.

4. In some cases these changes have driven RTOs/ISOs to modify energy and ancillary services market rules,[3] and the Commission has recognized a potential need for broader adoption of such revisions.[4] In other cases these changes have motivated resource adequacy reforms, including a ramp product in CAISO,[5] penalties when capacity resources fail to deliver energy during emergencies in ISO New England[6] and

[2] *See, e.g.*, National Oceanic and Atmospheric Administration, National Centers for Environmental Information "U.S. Billion-Dollar Weather and Climate Disasters" (2022), available at https://www.ncei.noaa.gov/access/billions/.

[3] For example, the Commission has approved a number of energy and ancillary services market reforms in recent years, including new ramp products. *See, e.g.*, *Midcontinent Independent System Operator, Inc.*, 149 FERC ¶ 61,095 (2014) (conditionally accepting, subject to a compliance filing, MISO's proposal to introduce a new ramp capability product); *Midcontinent Independent System Operator, Inc.*, 170 FERC ¶ 61,075 (2020) (accepting MISO's proposal to implement a 30-minute Short-Term Reserve product in its Day-Ahead and Real-Time Market); and *Southwest Power Pool, Inc.*, 180 FERC ¶ 61,088 (2022) (accepting SPP's proposal to implement an Uncertainty Reserve product).

[4] At two technical conferences held in September and October 2021, the Commission heard extensive testimony about operators' increasing need for operational flexibility, market mechanisms already employed to seek to acquire that flexibility, and ideas for additional market reforms to address the growing need for flexibility. *See* Supplemental Notice of Technical Conference on Energy and Ancillary Services in the Evolving Electricity Sector, Docket No. AD21-10 (filed Sept. 3, 2021); Supplemental Notice of Technical Conference on Energy and Ancillary Services in the Evolving Electricity Sector, Docket No. AD21-10 (filed Oct. 7, 2021).

[5] *California Independent System Operator Corporation*, 156 FERC ¶ 61,226 (2016).

[6] *ISO New England Inc.*, 147 FERC ¶ 61,172 (2014).

PJM,[7] and effective load carrying capability capacity accreditation changes in PJM,[8] NYISO,[9] and SPP.[10] While I have not agreed with the specific path taken in some of these proposals, it is essential that grid operators update their market rules to adapt to changing market conditions, and this diversity of efforts demonstrates that there is no single, one-size-fits all fix across all regions. At the same time, however, the Commission must review each particular proposed rule change in detail, ensuring that it does not create unjust and unreasonable, or unduly discriminatory rates. It is not sufficient that a proposal represents an improvement over the status quo, which itself may no longer be just and reasonable in light of current and future market conditions.

5. Here, MISO proposes two significant resource adequacy reforms: a new capacity accreditation methodology for Schedule 53 resources, which include thermal and demand response resources,[11] and a shift to seasonal capacity auctions. MISO states that the reforms in this filing are part of MISO's broader "Reliability Imperative" effort and fit within the "Market Redefinition" pillar of that effort, which aims "to ensure that resources with needed capabilities and attributes will be available during the highest risk periods across the year."[12] MISO explains that its objectives include providing a deeper assessment of system needs in the highest risk periods, including required capabilities such as flexibility; improving how resources are accredited for capacity; and developing market products that provide the right incentives for resources to maintain system reliability.[13] MISO asserts that it "cannot reliably operate the system if the resources it depends on do not or cannot perform (that is, do not provide energy or reserves) during

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[7] *PJM Interconnection, L.L.C.*, Docket No. ER15-623-000 (March 31, 2015) (delegated order).

[8] *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,056 (2021).

[9] *New York Independent System Operator, Inc.*, 179 FERC ¶ 61,102 (2022).

[10] *Southwest Power Pool, Inc.*, 180 FERC ¶ 61,074 (2022). I note that I dissented from this order because SPP failed to submit tariff revisions that comported with the rule of reason and thus it was impossible to conclude that SPP's proposal was just and reasonable. Also, as is the case in MISO's proposal, I was concerned that SPP did not adequately justify certain aspects of its proposal. *See id.* (Clements, Comm'r, dissenting).

[11] *See* Majority Order at P 91 (discussing MISO's definition for Schedule 53 resources).

[12] Wright Testimony at 13.

[13] *Id.* at 13-14.

periods of highest reliability risk."[14] It argues that its proposed reforms will foster efficient investment decisions by capacity resource owners consistent with resource performance during times of need.[15]

6. MISO's justification for its proposed reforms is therefore that they will value capacity consistent with its actual availability during periods of highest reliability risk and will incentivize capacity resource owners to invest and maintain their facilities so that they are more likely to be available during those periods.

7. Properly calibrated, I agree that MISO's proposal could satisfy these objectives and produce just and reasonable capacity rates. However, while the general thrust of MISO's proposal is appropriate, it contains several design flaws that will impede the proposal's ability to satisfy these objectives, and result in compensation for resources that does not match their true capacity contribution to the region. It also contains ambiguous tariff language inconsistent with MISO's expert testimony that creates the potential for the exercise of market power. Considering the significance of MISO's proposal, the Commission's duty to engage with the details to ensure grid reliability and consumers are protected was particularly important. But the Majority Order glosses over these critical details. While a narrow rejection order could have set the stage for MISO to return with an improved proposal that addresses these issues, today's order cements flaws into the region's market design, thereby undermining a just and reasonable outcome.

VII. Seasonal Accredited Capacity Methodology

8. In transitioning to a seasonal market, MISO's proposal devises a new method of crediting resources for each season based on their historical performance during 65 hours when emergency conditions or tight operating conditions were present. While MISO justifies this general framework, it includes several unsupported design features that cause MISO to look to the wrong set of hours, and to credit resources that are unlikely to be capable of performing when called upon. These flaws threaten system reliability and make for a poor foundation on which MISO's new proposal rests.

9. MISO argues that "[r]esource accreditation should reflect the anticipated capability and availability of Planning Resources during times when they are most needed,"[16] but unfortunately its SAC methodology for valuing thermal resources falls short of this goal. The SAC methodology seeks to measure each resource's anticipated availability by assessing its prior performance during 65 hours of emergency or other

[14] *Id.* at 14.

[15] Smith Testimony at 19-20.

[16] McFarlane Testimony at 17.

tight operating conditions, which MISO calls "RA Hours." Critical design decisions include (1) determining what constitutes an RA Hour; (2) determining what constitutes "availability" during each of those RA Hours, particularly if the resource was offline at the time; and (3) determining under what circumstances a resource that was on outage during RA Hours will be exempted from having its future accreditation reduced due to its unavailability. Each of these elements of MISO's proposal has flaws, as identified by MISO's Independent Market Monitor (IMM) and other stakeholders.

10. I recognize that the IMM supports MISO's overall proposal despite these flaws. The IMM states that "MISO made a number of changes in the course of the stakeholder process that are likely to reduce the benefits" of the proposal, but the IMM clarifies that it is supporting the proposal nonetheless "because we believe they are improvements over MISO's current market design and rules."[17] While I agree that, on balance, MISO's proposal likely provides a better framework than the status quo, a rate revision submitted pursuant to section 205 of the Federal Power Act is not necessarily just and reasonable solely because it is an improvement to the existing rate.[18] Rather, the filing utility bears the burden to demonstrate that the rate revision is itself just and reasonable.[19] Because MISO has failed to demonstrate through substantial evidence and sound economic logic that the market design choices discussed above are just and reasonable, the Commission's duty is to reject the proposal. Rejecting with guidance would have created the opportunity for MISO to revise it and submit an improved proposal that is truer to MISO's intent to accredit capacity consistent with its likely availability during periods of greatest reliability risk.

A. MISO looks to the wrong set of hours to determine capacity performance

11. With regard to setting RA Hours, MISO acknowledges that in many seasons, particularly non-summer seasons, it is unlikely there will be 65 hours of emergency conditions. MISO proposes to backfill the remainder with other historical hours that saw the tightest operating margins.[20] The calculation of operating margin (i.e. resource

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[17] IMM Comments at 2.

[18] *See PJM Interconnection, L.L.C.*, 180 FERC ¶ 61,089, at P 47 n.111 (2022) (finding that even if PJM's contention that its Intelligent Reserve Deployment proposal is an improvement over its current approach is correct, that does not render the proposal just and reasonable).

[19] 16 U.S.C. § 824d(e).

[20] McFarlane Testimony at 20-21. While the Commission finds this approach of defining RA hours for seasonal auctions in part based on hours from different seasons to be just and reasonable, I note that this determination is specific to the context of MISO

supply minus demand at any given point in time) is therefore of great consequence because it will determine in which hours each resources' availability is evaluated. MISO proposes to include in operating margin the capacity of any offline resource with a lead time of 12 hours or less. But offline capacity with a lead time of more than 6 or 8 hours is not "available" in any given hour, so MISO's approach inaccurately excludes some tighter hours from the "RA Hours" designation by overcounting supply, while including as RA Hours some periods where operating margin is comparatively less tight.

12. As the IMM and Clean Energy Coalition argue, unexpectedly tight hours typically arise on a shorter timeframe, requiring a response time faster than many of the resources counted within that operating margin can deliver.[21] As the IMM explains, a 2-6 hour lead time is appropriate, because that "is the timeframe in which MISO often recognizes that emergency conditions are developing."[22] Resources with lead times as long as 12 hours "are not relevant" to the reliability threat during these events "because the conditions were not recognized 12 hours in advance."[23]

13. Defining tight operating conditions assuming that resources with a 12-hour lead time are available, as MISO does, could cause MISO to ignore hours where offline resources with a lead time between 6 and 12 hours are comparatively abundant, when in fact uncertainties like load forecast errors, wind forecast errors, large unit forced outages, and other factors that are not known far in advance pose a reliability risk for the system for which these resources are of no use. MISO's approach thereby inappropriately shifts RA Hours toward more foreseeable conditions where operating conditions are not truly as

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applying it to schedule 53 resources and the evidence put forth to demonstrate alignment of its choice of hours with the historical availability of those resources. *See* Majority Order at P 246. Continuing this approach would not necessarily be just and reasonable if the SAC methodology were to be extended beyond schedule 53 resources, which may have greater variation between seasons. As DTE, MISO TOs, and Minnesota Power argue, using hours from other seasons undermines the seasonality of the construct. DTE Protest at 14; MISO TOs Comments at 9; Minnesota Power Comments at 2. And while a thermal resource's performance during tight hours in one season may strongly correlate with performance in tight hours in another season, that may not be the case for other types of resources such as wind and solar, whose performance may be more closely linked to the weather.

[21] *See* IMM Comments at 9; Clean Energy Coalition Comments at 11.

[22] IMM Comments at 8. *See also* Clean Energy Coalition Comments at 11 (arguing that MISO's approach "fails to consider how unexpectedly tight hours typically arise in the range of 2 to 8 hours because reality diverges from forecasts").

[23] IMM Comments at 9.

tight, while excluding hours that are in fact tighter when considering the system's true ability to respond to uncertainties. The IMM notes that as the uncertainties on the system grow, the adverse effect of MISO's 12-hour lead time assumption are likely to increase.[24]

14. While MISO must necessarily make some qualitative judgments in determining how to design its seasonal capacity mechanism (including whether to use such an "RA hour" construct and, if so, which RA hours to look at), it fails to offer sufficient defense of its 12-hour lead time rule. In support of the 12-hour threshold, MISO's witness only emphasizes that its starting point was an even longer 24-hour lead time threshold, which it shortened based on the feedback from the IMM.[25] But in endorsing the IMM's general logic, MISO provides no explanation as to why it did not choose a shorter lead time threshold that better matched likely system conditions contributing to the concerns this construct is intended to address.

B. MISO's capacity accreditation does not match resource contribution to system reliability

15. MISO repeats this same mistake of crediting resources incapable of contributing to system reliability when determining resource availability for purposes of accreditation. MISO proposes to credit a resource as having been available during an RA Hour if it was offline but had a lead time of 24 hours or less. But as the IMM explains, this lax crediting includes many resources that will not be able to deliver any value when called upon.[26] Further, MISO's attempted rationale to justify the inconsistency of its approach of using a longer 24-hour window for resource accreditation while using a shorter 12-hour lead time used for purposes of determining RA Hours does not make sense. MISO argues that while the 12-hour threshold better represents "times of need," the 24-hour threshold "better reflects whether MISO could have reasonably committed a resource in its Day-Ahead Market or Forward Reliability Assessment Commitment processes."[27]

16. But examining whether a resource *could* have been committed answers the wrong question. As the IMM explains:

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[24] *Id.*

[25] McFarlane testimony at 23. The Majority Order likewise justifies the 12-hour threshold as superior to a 24-hour threshold, but does not explain why it finds 12 hours to be reasonable in light of the criticisms that a shorter threshold was necessary to align with resources' true ability to serve the system. *See* Majority Order at P 255.

[26] IMM Comments at 10.

[27] McFarlane testimony at 24.

> [MISO's] logic is flawed . . . If most of the threats to reliability emerge during the operating day, only offline resources that can [be] started once the threat is recognized can contribute to reliability. Offline resources that could theoretically have been committed the prior day, but whose lead time is too long for them to start to mitigate the reliability threat provide no value in such events.[28]

17. In other words, whether a resource could have been committed if MISO knew about a reliability situation in advance is beside the point when assessing contribution to tight operating hours that arise on a shorter timeframe.[29] By MISO's own admission, "[h]istorically most MaxGen Events have been driven by events occurring after the Day-Ahead Market clears."[30]

18. The majority declares that "[r]esources that can be committed through the Day-Ahead or Forward Reliability Assessment Commitment process contribute to MISO's resource adequacy needs." Majority Order at P 275. But this runs contrary to the evidence in the record that *offline* resources with response times longer than 6 or 8 hours are incapable of contributing to the system during times of need. The majority hypothesizes that there may be capacity needs that could be identified with longer than 12 or even 24 hours of advanced notice, "such as resources being out on an extended planned or forced outage . . . or certain meteorological events forecast 24 or more hours in advance."[31] But those events, to the extent they may exist, could be responded to by resources with a lead time of longer than 24-hours, making the 24-hour requirement arbitrary. In setting a lead time of 24 hours, MISO divorces its accreditation determination from the question whether a resource contributes to reliability during RA

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[28] IMM Comments at 10.

[29] *See* IMM Comments at 10 ("It is irrelevant whether MISO theoretically 'could have reasonably committed a resource' through the day-ahead process. If most of the threats to reliability emerge during the operating day, only offline resources that can started once the threat is recognized can contribute to reliability.").

[30] MISO February 10 Answer at 43. While this supports declining to offer credit to resources with lead times in excess of 24 hours, it runs contrary to MISO's decision to credit resources with lead times between 6 and 24 hours, and also does not explain the inconsistency between the lead time threshold used for measuring RA hours and the threshold used for accreditation.

[31] Majority Order at P 276. It is notable that neither MISO nor any party in the record makes this argument, meaning that the majority's contention is only a guess as to why such resources may have value.

Hours. This is at odds with the design of its proposal and lacks any reasonable basis in the record.[32] It is worth noting that were a shorter response time requirement implemented, this would not give slow-response resources zero capacity credit. Rather, resources that were online during RA Hours and therefore contributing to resource adequacy would still get credit for contributing to system needs.[33]

19. Over-valuing less flexible units is unjust and unreasonable not only because it gives resources more credit than they deserve, but also because pursuant to the SAC's design it will necessarily under-value more flexible and available resources.[34] This misalignment between payment and reliability contribution is unjust and unreasonable due to its financial implications, and also because it undermines system reliability. The IMM suggests a reasonable alternative of a sliding scale, which would "recognize that certain units (e.g., fast-starting units) provide more reliability value than other units (long-lead time units)," and measure windows with tight operating conditions accordingly.[35] While MISO was not required to propose this alternative, it does have the burden under section 205 of justifying why the threshold it has chosen properly credits resources for their contribution to reliability and is therefore just and reasonable. It has not done so.

C. MISO's outage framework is unjust and unreasonable

20. Another significant flaw in MISO's proposed framework is its proposal to exempt resources from negative impacts to their accreditation if the resource owner provides 120-days' notice of the outage to MISO and MISO determines there is an adequate "maintenance margin." This proposal is logically inconsistent and inadequately

[32] To the extent MISO seeks to serve a different need besides contribution to RA Hours, such as the hypothetical need for resources to provide energy adequacy for events that are known long in advance, it has not demonstrated such a need in this record, nor justified why a 24-hour lead time requirement is the right threshold to accredit capacity for serving such a need.

[33] The majority confusingly states that "a resource being unavailable within 12 (or fewer) hours because MISO did not select it through a day-ahead or FRAC commitment process is not a reasonable basis to penalize that resource by assigning it a zero SAC accreditation value for those hours." Majority Order at P 276. This is hard to understand, given that when a resource with a long lead time is not selected it does not and cannot contribute to resource adequacy during RA Hours, whereas a resource that is selected does contribute.

[34] IMM Comments at 10.

[35] *Id.*

supported. As the IMM states, "[r]esources that schedule more frequent or longer-duration outages are less likely to be available during reliability events than resources that take less frequent or shorter-duration outages."[36] Further, as the IMM asserts, MISO's maintenance margin calculation is incapable of accounting for any and all unexpected factors and conditions that may lead to reliability risk, including extreme weather, system contingencies, unusual intermittent output levels, and load forecast errors.[37] In approving an outage—and the attendant accreditation exemption—MISO will have no way of knowing months in advance if challenging operating conditions will arise and the resource will be needed. Indeed, the very need for an exemption suggests the opposite. If in fact MISO could be sure that tight operating conditions would not occur where it has "maintenance margin," then resources could schedule during that period without fear that RA Hours would occur and their accreditation would be penalized. But the truth is that MISO may find itself short during those periods.

21. MISO does not adequately justify why it proposes to give full credit to resources as though they are providing reliability value during these periods when that is not the case. The Majority Order accepts MISO's rationale, that it "appropriately balances the need for resources to have flexibility to schedule planned outages and the need for MISO to have such visibility."[38] But as Clean Energy Coalition argues, MISO's framework "offer[s] little motivation for a resource owner—even one with a commitment under the Planning Resource Auction—to think twice before scheduling an outage, even at peak times."[39] And MISO provides no information to suggest that full accreditation is necessary in order to incent resources to give MISO adequate notice as to planned outages, or to engage in necessary maintenance activities.

22. To the contrary, the Majority Order's own logic suggests that the accreditation rules themselves give resources ample built-in incentive to perform maintenance: "Given the functional relationship between resource accreditation and resource availability," resources likely "will not risk delaying necessary maintenance" even if that means losing some accreditation in the short run because that could "result in resource underperformance, unavailability, or forced outages, which would negatively impact that resource's future accreditation."[40] In other words, the accreditation rules "encourage resource owners to appropriately balance maximizing short-term availability when it is

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[36] *Id.* at 12.

[37] *Id.*

[38] Majority Order at P 265.

[39] Clean Energy Coalition Comments at 16.

[40] Majority Order at P 265.

most needed and perform[ing] maintenance, which requires scheduling planned outages, to ensure long-term resource performance."[41] Neither MISO nor the majority explain why an outage exemption is necessary given the presence of these incentives, much less reason why resources should be given full credit as opposed to a more limited incentive to provide advanced outage notification.

23. Moreover, beyond overcompensating resources when they are not contributing to system reliability, MISO's proposed maintenance framework also draws arbitrary lines that many market participants have rightly protested as lacking a logical basis. For example, several entities note that MISO has not explained how the proposed 120-day notice cutoff would increase resource availability during RA Hours,[42] pointing out that the proposal provides a relative disincentive against short to medium term maintenance.[43] They persuasively argue that this framework arbitrarily discourages non-consecutive outage days, as well as conducting any maintenance during each 120-day window even if there is an adequate maintenance margin during that time.[44] Others ask why, when resources that fully de-power are eligible for full credit, are those that de-rate for a period subject to an accreditation haircut?[45] MISO's framework also includes a capacity replacement obligation for any resource whose outage lasts more than 31 days in a single season,[46] providing an incentive for resources to arbitrarily stack outage requests at the

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[41] *Id.*

[42] *See* Majority Order at P 129 (citing Consumers Energy Limited Protest at 2, East Texas Protest at 9).

[43] Consumers Energy Limited Protest at 1. The majority cannot have it both ways. If accreditation rules provide ample incentive for short to medium term maintenance without an exemption, then they should also be expected to adequately incent long term maintenance on their own.

[44] Midwest TDUs Protest at 15-17.

[45] *See* Duke Energy Comments at 4-5; MISO TOs Comments at 8. MISO justified the lack of eligibility of de-rates merely by stating that its current outage coordination process does not contemplate de-rates, which have traditionally been submitted with little advanced warning. *See* MISO Deficiency Letter Response at 10. But given MISO's changes to its accreditation framework and the opportunity for resource owners to receive an exemption for a scheduled outage, MISO has an obligation to explain why such a process should not be available for de-rates beyond merely invoking past practice in a different regulatory context.

[46] *See* Majority Order at P 286.

last 31 days of the season leading into the first 31 days of the next, regardless of whether that timing is appropriate from the perspective of grid reliability.

24. As with the elements discussed above, the negative effects of MISO's decision to credit unavailable resources as though they were serving the system are likely to grow in the future "[s]ince reliability events are increasingly likely to occur when they are not expected because of the uncertainties described earlier" such as load forecast errors, wind forecast errors, large unit forced outages, and other factors that are not known far in advance.[47]

D. The Commission should have rejected MISO's proposal given its capacity accreditation design flaws

25. By choosing to support its SAC accreditation on the grounds that it aligns accreditation with resources' likely availability in the future during times of greatest reliability risk, MISO bears the burden of demonstrating how these critical design choices support that objective or otherwise lead to just and reasonable outcomes. Using assumptions that over-value less flexible, longer lead-time resources and under-value more flexible, shorter lead-time resources undercuts MISO's justification. So, too, does an outage exemption approach that ignores that resources that require more frequent or longer outages provide less reliability value than those that require less frequent or shorter planned outages. By failing to accredit resources consistent with their actual value in time of greatest reliability risk, these design choices will hinder efficient capacity procurement, cause unjust and unreasonable capacity rates, and pose a threat to system reliability.

26. Rejecting MISO's proposal for its failure to properly align capacity credit with reliability value is supported by precedent, as the Commission has previously found that rules that do not adequately align capacity payment with a resource's true contribution to system reliability are not just and reasonable.[48]

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[47] IMM Comments at 12.

[48] *ISO New England, Inc.*, 147 FERC ¶ 61,172, at P 23 (2014) (finding ISO New England's capacity market rules unjust and unreasonable because they failed to provide adequate incentives for resource performance, thereby threatening reliable operation of the system and forcing consumers to pay for capacity without receiving commensurate reliability benefits); *see also PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208, at P 22 (2015) (approving a proposal to better align capacity payment with true contribution to system reliability).

VIII. Seasonal Capacity Auctions

27. MISO's proposal is also flawed because it may provide an opportunity for capacity sellers to exercise market power and potentially expose consumers to unjust and unreasonable capacity prices. MISO proposes to conduct auctions for all four seasons simultaneously, which requires revisions to its market power mitigation framework. I am not convinced by the record before us that the revisions MISO has offered protect consumers against inflated capacity prices.

28. MISO's proposal to conduct four seasonal auctions simultaneously for each Planning Year is novel. NYISO, the only RTO with an existing seasonal auction framework, conducts sequential auctions.[49] Conducting four auctions simultaneously adds complexity beyond that involved in conducting a single annual auction or sequential seasonal auctions. A capacity seller must determine how to offer into each seasonal auction without knowing the results—whether its resource cleared and at what price—of the other three.

29. A critical question for purposes of market mitigation under these circumstances is what constitutes an economic offer that allows a resource's costs of providing capacity (i.e., its "avoidable" or "going-forward" costs) to be reflected and adequately compensated while preventing excessive compensation. MISO's proposal and accompanying testimony send mixed signals as to how this critical question will be answered. As explained below, the tariff appears to prevent excessive compensation, but MISO's testimony suggests that it may be permissible. Given the complexity introduced by MISO's proposed simultaneous auction process, I fear that this ambiguity may provide a basis for excessive market offers, leading to unjust and unreasonable costs for consumers.

30. Part of MISO's proposed mitigation framework involves calculating a facility-specific reference level under certain circumstances (i.e. it requires calculating an "economic" offer from the unit). Tariff Module D, Section 64.1.4.f details what going-forward costs are permissible in a facility-specific reference level. It states, in relevant part:

> The Going-Forward Costs of a Planning Resource . . . shall be calculated by determining the costs that can be avoided by the . . . seasonal operation of the Planning Resource. Thus, Going-Forward Costs are equal to the costs that will be borne by a Planning Resource supplier by either maintaining in, or

[49] *See* NYISO Market Services Tariff § 2.3 (defining a winter and summer Capability Periods, for which auctions are conducted no later than 30 days prior to the start of each such period).

> returning a Planning Resource to, commercial operation for a specific Season of a Planning Year minus the costs that would be borne by such supplier resulting from retiring, suspending, or keeping a Planning Resource in suspension.

31. This appears to say that going-forward costs—and by extension a seller's seasonal auction offer price—may only include costs associated with providing capacity *for that season*.

32. However, MISO's testimony suggests something different. MISO's expert witness Shawn McFarlane, testifying in support of the proposal, states: "[Capacity] Offers may not reflect the actual costs of providing capacity if a Planning Resource clears in multiple Seasons but *its annual costs are compressed into each season's [capacity] Offer to ensure recovery if the Resource only clears in a single Season*."[50]

33. So here is what I am worried about: If, contrary, to the wording of section 64.1.4.f.iii, a seller may include in *each* of its seasonal auction offers up to its *annual* going-forward costs, and that seller clears multiple auctions, it could receive in excess—potentially up to two, three, or four times—its legitimate costs of providing capacity.[51] Even worse is if that resource sets the clearing price, such that all cleared resources would be paid not based on the marginal cost of providing capacity for the season, but based on a multiple thereof. Such an outcome cannot constitute just and reasonable rates for capacity.

34. MISO's proposal includes other mechanisms to limit under- and over-compensation that can result from its simultaneous auction design: a clearing price adjustment coupled with a new make-whole payment.[52] But as MISO acknowledges, there is a scenario where those mechanisms are not triggered despite the potential for auction revenues to exceed CONE on a per-MW basis,[53] in which case prices could unjustly and unreasonable rise to excessive levels should MISO's facility-specific

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[50] McFarlane Testimony at 44 (emphasis added).

[51] It appears this could occur when the clearing price adjustment is not triggered, meaning there is no *ex post* curb on compensation.

[52] *See* Majority Order at P 37 (discussing these design features).

[53] MISO's witness Shawn McFarlane explains that this will occur "whenever the Planning Resource Auction clears at least one Season, but fewer than all Seasons with Auction Clearing Prices above the daily value of CONE." McFarlane Testimony at 41-42.

reference calculation allow resources to make offers that would recoup up to that resource's annual costs in each of the four seasonal auctions as Mr. McFarlane suggests.

35. This is not the only case of inconsistency between MISO's proposed tariff and Mr. McFarlane's testimony. The Majority Order highlights another such inconsistency, regarding the applicability of Tariff section 69A.7.1.c.x governing the pricing for Zones in ZRC Shortage and Near-Shortage Conditions, and in that case reasons that the approach in the McFarlane testimony is more appropriate and orders MISO to file revised tariff sheets reflecting the testimony.[54] While the absence of such clarification with regard to facility-specific reference levels should dictate that the tariff governs, the McFarlane testimony presents concerns about how it will be applied in practice. Before approving MISO's proposal, the Commission should have insisted on obtaining a clear answer to this question from MISO. I dissent from the decision to approve such a significant market change in the face of this ambiguity on a critical consumer protection measure.

36. The Commission's approval of MISO's ambiguous proposal is especially discouraging because, as NYISO's experience shows, a proven alternative market design is readily available: sequential auctions that take place at different times in advance of each particular season.[55]

IX. MISO's proposal further entrenches disparate treatment between Schedule 53 non-Schedule 53 resources

37. As discussed above, but for the flaws I have identified, I would have approved MISO's proposal as a reasonable near-term mechanism to enhance system reliability. At the same time, however, I am concerned that the proposal may set MISO on a course that makes it more difficult to arrive at a future system of capacity accreditation and market design that treats all resources equally.

38. Clean Energy Coalition urges the adoption of three principles in order to prevent discrimination between different technologies: (1) "a resource that mitigates more risk should receive higher accreditation"; "(2) two resources that mitigate the same level of risk should receive the same accreditation"; and (3) "accreditation of each resource should be the same, regardless of the order in which resources' accreditation is calculated

[54] *See* Majority Order at PP 84-85.

[55] The IMM suggests approaches that would be more similar to the NYISO construct and accordingly derive similar benefits: offering "prompt seasonal auctions," or at minimum conducting each seasonal auction sequentially, even if all such auctions are carried out in a single time period far in advance of some of the relevant seasons. *See* IMM Comments at 4-5.

and accounted for."[56] While our precedent has traditionally permitted the application of different capacity accreditation methodologies to different resource types as not undue discrimination given the different characteristics of various technologies,[57] the Clean Energy Coalition rightly highlights that equal treatment should be the goal to the extent it is achievable.

39. Grid operators have gained extensive experience with wind and solar resources over the past decade, and are beginning to rapidly integrate energy storage resources in the wake of market developments and the Commission's Order No. 841.[58] As methodologies for valuing these resources mature, and as grid operators engage in efforts to more accurately value thermal and demand response resources, it becomes reasonable to expect grid operators to move toward methodologies that are more consistent across resource types. And even where uniformity is not fully achieved, the Commission should assess valuation methodologies side by side to ensure that even if different, the methodologies when taken together treat different resource types fairly relative to one another.

40. Many of the changes proposed in MISO's new SAC methodology are motivated by the same fundamental concern underlying ELCC methodologies that are being pursued in other regions: the need to value capacity more accurately. But as Clean Energy Coalition points out, MISO's chosen "*ex post* approach based on actual historical performance" is at odds with MISO's ELCC valuation methods that use an *ex ante* approach "based on a statistical expected value."[59] MISO's proposal therefore creates a significant concern that it may further entrench the differences between Schedule 53 and non-Schedule 53 resource accreditation in a manner that makes it more and not less difficult to arrive at a consistent framework for all resources.

41. Further, MISO's chosen approach entails the use of a UCAP/ISAC ratio "to ensure continued alignment between MISO's UCAP-based Reserve Requirements and its SAC proposal," but declines to apply this same ratio to non-Schedule 53 resources because those resources "will not experience the same level of accreditation reduction as Schedule

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[56] Clean Energy Coalition Response to MISO Deficiency Letter Response at 7.

[57] *See, e.g.*, *PJM Interconnection,* 176 FERC ¶ 61,056 at P 70 (finding that PJM "need not extend the ELCC framework to Unlimited Resources to demonstrate that its filing is just and reasonable").

[58] *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators* (Order No. 841), 162 FERC ¶ 61,127 (Feb. 15, 2018).

[59] Majority Order at P 149 (citing Clean Energy Coalition Protest at 5).

53 Resources."[60] But while MISO justifies this approach as a reasonable mechanism to avoid raising demand to a level not necessary to maintain system reliability, a natural consequence of it is that it does not change the relative valuation of Schedule 53 versus non-Schedule 53 resources despite the acknowledged shortcomings of the capacity valuation methodology MISO is applying to Schedule 53 resources before the proposed tariff changes go into effect. If MISO's current method over-credits Schedule 53 resources as compared to non-Schedule 53 resources, MISO's proposal accepted by the Commission today does not address that concern. Further, should MISO undertake future efforts to more accurately value non-Schedule 53 resources, unfairness could be introduced if MISO does not employ a similar ratio for those resources, or address the relative valuation of Schedule 53 and non-Schedule 53 resources in a different way. While the Majority Order finds that the Clean Energy Coalition has not provided evidence demonstrating that Schedule 53 resources are over-credited as compared to non-Schedule 53 resources,[61] that finding does not preclude a conclusion that the tariff is unjust and unreasonable should the Clean Energy Coalition or another stakeholder bring forth such evidence in the future.

42. MISO is not alone in proposing a new capacity accreditation method that raises potential fairness concerns with regard to relative treatment of different resource types. SPP's recently-accepted ELCC methodology raises a similar concern, as it reduces the credit given to wind, solar, and run-of-the-river hydroelectric resources while leaving an outdated Installed Capacity methodology in place for other resources.[62] The Commission should keep a keen eye on this fairness issue as capacity valuation methodologies develop across regions, gathering data and potentially interceding as appropriate to ensure just and reasonable and not unduly discriminatory rates.

43. Ultimately, whether MISO initiates changes itself or is forced to do so through a section 206 proceeding, MISO's long run direction should be toward equal treatment of all resources across capacity types. It is therefore lamentable that, in making a much-needed shift toward a seasonal capacity construct that more accurately values resources' contributions to the system, MISO has chosen an approach that sets Schedule 53 and non-Schedule 53 resources on different courses. In the coming months and years, it should work to bring its divergent resource valuation techniques into alignment.

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[60] *Id.* at P 278.

[61] *Id.*

[62] *See Southwest Power Pool, Inc.*, 180 FERC ¶ 61,074 (2022) (Clements, Comm'r, dissenting, at PP 12-14).

X. Conclusion

44. I conclude by highlighting the difficult position the Commission is in with regard to responding to MISO's proposal and similar recent initiatives to improve capacity valuation. In the wake of the D.C. Circuit's decision in *NRG v. FERC*,[63] the Commission faces a significant temptation to accept rather than reject any rate proposal that improves upon the status quo, even where a portion of such a proposal is unjust and unreasonable or unduly discriminatory. The reality is that the Commission does not have the capacity to open a section 206 investigation in every instance where an existing rate may be unjust and unreasonable or unduly discriminatory. Even if it did, modifying rates via section 206 processes is time consuming, contentious, and triggers *ex parte* rules that make open discussion of challenging issues more difficult. So, it is understandable that accepting a proposal despite its flaws is compelling.

45. The temptation to accept rate proposals is particularly strong where they address reliability challenges, given the Commission's paramount responsibility of ensuring system reliability. But giving in to this temptation does not ensure proposals will be sufficient to address any given reliability challenge, and risks significant costs. Today's decision and the recent decision accepting Southwest Power Pool's ELCC valuation methodology[64] have together set a low bar for RTO filings. Together, they effectively say that omissions and inconsistencies in tariff filings will be tolerated, with the Commission doing the work of the RTO to fill in the gaps in the filing and push it across the finish line. They leave stakeholders guessing as to the meaning of critical provisions even after the Commission issues its decision, depriving them of notice and due process in responding to proposed changes. Even more concerningly, today's order suggests that, when it comes to reliability, market design flaws are permissible. In my view the opposite is true: the Commission should be particularly insistent that market design is sound in carrying out our bedrock responsibility of ensuring a reliable grid.

46. Today's decision bakes troubling flaws into MISO's capacity rules that may jeopardize reliability for years to come. While the majority urges MISO to continue working to improve its capacity rules,[65] it is not clear how some of these improvements could be made within the confines of MISO's stakeholder process absent Commission action forcing such an outcome. Taking just one example, the IMM observes that MISO's proposed outage "exemptions were introduced in response to stakeholder

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[63] 862 F.3d 108 (D.C. Cir. 2017).

[64] *Southwest Power Pool, Inc.*, 180 FERC ¶ 61,074 (2022).

[65] *See* Majority Order at P 269 ("[W]e encourage MISO to continue to evaluate whether its current outage coordination process could be improved. . . .").

feedback from entities concerned that such outages would reduce their accreditation."[66] The Commission has no reason to believe that these stakeholder dynamics will change such that MISO will better align capacity payments with system value in the future. Today's order therefore puts a flawed short-term improvement ahead of long-term results, leaving it to industry to regulate themselves. In my view, it would be better for us to insist the job is done right. "Measure twice, cut once," as the old adage goes.

For these reasons, I respectfully dissent.

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Allison Clements
Commissioner

[66] IMM Comments at 12.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Midcontinent Independent System Operator, Inc.	Docket Nos.	ER22-495-000 ER22-495-001
Midcontinent Independent System Operator, Inc.	Docket Nos.	ER22-496-000 ER22-496-001

(Issued August 31, 2022)

CHRISTIE, Commissioner, *concurring*:

1. I support accepting MISO's proposed seasonal resource adequacy construct in Docket Nos. ER22-495-000 and ER22-495-001. It is now a truism, established through numerous Commission precedents,[1] that in an FPA section 205 filing, we are not looking for the perfect proposal, or even one that we may prefer as relatively better than the specific one proposed in the filing. Instead, we look to see if the specific proposal filed

[1] *E.g.*, *City of Winnfield v. FERC*, 744 F.2d 871, 875-76 (D.C. Cir. 1984); *PJM Interconnection, L.L.C.*, 170 FERC ¶ 61,243, at P 57 (2020) (citing *Petal Gas Storage, L.L.C. v. FERC*, 496 F.3d 695, 703 (D.C. Cir. 2007); *Cities of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984); *Cal. Indep. Sys. Operator Corp.*, 128 FERC ¶ 61,282, at P 31 (2009)); *see also Midcontinent Indep. Sys. Operator, Inc.*, 180 FERC ¶ 61,141, at P 79 (2022) (citations omitted).

meets the "just and reasonable" rates requirement of section 205.[2] I believe MISO's proposal herein meets that standard.[3]

2. I also support rejecting MISO's proposed Minimum Capacity Obligation (MCO) in Docket Nos. ER22-496-000 and ER22-496-001 because I believe the Market Monitor's concerns about the potential exercise of market power cast sufficient doubt on the proposal's claim to meet the section 205 standard.[4] However, I emphasize that we are rejecting only the MCO proposal before us and that we are not prejudging a future MCO filing by MISO.

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[2] I agree generally with the concern expressed by Commissioner Clements in paragraphs 44 and 45 of her dissent to the order, which I understand to mean that we are constrained by the precedents related to section 205 filings, including, of course, *NRG v. FERC*, 862 F.3d 108 (D.C. Cir. 2017), that do not let us make non-minor improvements to RTO proposals. I also agree that trying to address every existing market design flaw through individual section 206 proceedings may simply not be workable. I would favor a more comprehensive approach to evaluating threats to reliability that are increasingly becoming evident in RTO markets, and in a manner not subject to the *ex parte* communications limits of contested individual filings. As I note herein in P 3 and Note 6, among the issues that should be examined in such a general proceeding should be the continued use of single-clearing price mechanisms in RTO markets. The European Union is already re-evaluating such mechanisms in light of skyrocketing prices in EU power markets. *See* Sam Fleming and Valentina Pop, *EU to unveil emergency measures to curb soaring prices: Pressure grows for bloc to reform markets by cutting link between electricity and the cost of gas*, FINANCIAL TIMES, August 29, 2022 ("Wholesale electricity costs reflect the price of the last unit of energy bought via auctions held in member states. In practice, this currently mirrors the price of natural gas rather than renewable energy or nuclear power. . . . However, [EU President Ursula] von der Leyen hinted in June that the commission would have to reconsider the system."), https://www.ft.com/content/02f848fc-3b80-4ddc-ba4f-26109d79db89.

[3] I note that the Organization of MISO States, Inc. (OMS) supports the seasonal resource adequacy filing, along with Michigan and Indiana individually. Louisiana supports the concept of a seasonal resource adequacy construct, but not the details of the proposal filed. Mississippi opposes the proposal. I also note that, while critiquing aspects of the filing, the MISO Independent Market Monitor (Market Monitor) overall supports it.

[4] *See* Market Monitor Protest, Docket No. ER22-496-000, at 13-18. I further note that OMS has filed no comments at all in the MCO proceeding, whether in support or opposition. Only two individual states filed comments, with Indiana in support and Illinois opposed.

3. Both cases serve to illustrate a much bigger issue: Regardless of the details of the market designs of the various RTOs/ISOs — which are not true markets at all but administrative constructs using an increasingly opaque, complex and questionable pricing mechanism[5] — it is the *states* which retain the primary responsibility to ensure their load-serving entities (LSEs) have adequate resources to serve their states' consumers. While regional system operators — RTOs and ISOs — are responsible for balancing the system on a real-time operational basis to keep the lights on, RTOs/ISOs are not regional long-term Integrated Resource Plan (IRP) planners of generating or other resources. Rather, it is the states which have the ultimate authority to decide which resources get built and which get retired and whether and how their regulated LSEs have sufficient generating capacity or demand-side programs to ensure that the lights stay on for their states' residents. Yes, the market design of federally regulated RTO/ISO markets certainly affects the entry or exit of generating resources from those markets, but even in RTOs/ISOs the states still retain their inherent police-power authority to direct their LSEs to achieve resource adequacy in ways other than through RTO/ISO markets — including various forms of self-supply, such as rate-basing, or purchased power agreements or other bilateral arrangements.

4. This is particularly true in MISO. No one disputes that the MISO capacity market has always been a purely *residual* option; it is not the primary option for an LSE to obtain the resources needed to ensure reliability.[6] Importantly, states need to focus on their own

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[5] For an excellent analysis of the theory behind Locational Marginal Pricing (LMP) and how it is supposed to work in RTO markets (and why it increasingly may not work any longer), see Tony Clark and Vince Duane, *Stretched to the Breaking Point: RTOs and the Clean Energy Transition* (July 2021), https://www.wbklaw.com/wp-content/uploads/2021/07/Wholesale-Electricity-Markets-White-Paper-07.08.21.pdf.

[6] As the Commission has explained:

> Notably, approximately 90% of the load in MISO is served by vertically integrated LSEs, the vast majority of which are subject to state integrated resource planning processes. To accommodate the make-up of the MISO's footprint, MISO's proposed Tariff provisions accepted in the February 2018 Order provide that its resource adequacy requirements "are complementary to the reliability mechanisms of the states and the Regional Entities . . . within the [MISO] region." Moreover, MISO's proposed Tariff language explains that the resource adequacy requirements "are not intended to and shall not in any way affect state actions over entities under the states' jurisdiction." In other words, unlike the centralized capacity constructs used in the Eastern RTOs/ISOs, MISO's

authority to ensure adequate generating resources to serve their citizens and not default to an administrative construct regulated by FERC.[7] I am encouraged by recent efforts by the Organization of MISO States to address this critical issue.[8]

For the reasons given above, I respectfully concur.

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Mark C. Christie
Commissioner

> Auction is not—*and has never been*—the primary mechanism for its LSEs to procure capacity.

Midcontinent Indep. Sys. Operator, Inc., 170 FERC ¶ 61,215, at P 13 (2020) (emphasis in original) (quoting MISO, FERC Electric Tariff, Module E-1, § 68A (33.0.0)); *see also Midcontinent Indep. Sys. Operator, Inc.*, 180 FERC ¶ 61,142, at P 110 (2022) (citation omitted).

[7] Indeed, although the MISO tariff provides that MISO will calculate the Planning Reserve Margin Requirements (Reserve Requirements) for LSEs, the MISO tariff also provides that, if a state regulatory authority establishes an alternate Planning Reserve Margin, MISO will use the alternate Planning Reserve Margin to calculate LSEs' Reserve Requirements for the geographic area under that state's jurisdiction. MISO, FERC Electric Tariff, Module E-1, § Module E-1, § 68A.7 (Establishing Planning Reserve Margin Requirements) (32.0.0).

[8] *See* OMS Resource Adequacy Summit (Aug. 8-10, 2022), https://www.misostates.org/index.php/meetings/other-meetings/2-uncategorised/380-ra-summit; *see also* Darren Sweeney, *Midwest Utilities Delay Plant Retirements To Offset Reliability, Cost Concerns*, S&P Global Market Intelligence, Aug. 19, 2022, https://www.capitaliq.spglobal.com/web/client?auth=inherit#news/articleabstract?id=71797391.

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