Midcontinent Independent System Operator, Inc.'s Reliability Based Demand Curve	)))	**Docket No. ER23-2977**

**Public Interest Organizations Limited Protest of
MISO's Proposed Tariff Revisions to
Implement a Reliability Based Demand Curve**

I. INTRODUCTION

Pursuant to Rule 211 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("FERC" or "Commission"),[1] Sierra Club, Natural Resources Defense Council, and the Sustainable FERC Project (collectively, "Public Interest Organizations" or "PIOs") submit this limited protest to Midcontinent Independent System Operator's ("MISO's") September 29, 2023 proposed revisions to its Open Access Transmission, Energy and Operating Reserve Tariff ("Tariff"), to implement a Reliability Based Demand Curve ("RBDC") in its annually operated seasonal Planning Resource Auction ("PRA"), in the above-captioned docket.

PIOs support MISO's overall effort to implement a "sloped" RBDC for many of the reasons MISO outlines in its Transmittal Letter, including that an RBDC should smooth capacity clearing prices in the PRA and enable it to provide more useful price signals to guide resource investment and retirement decisions across the MISO footprint.[2] PIOs also support MISO's

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[1] 18 C.F.R. 385.211 (2022).

[2] MISO Tariff Filing: Reliability Based Demand Curve (September 29, 2023) (hereinafter "MISO Transmittal Letter") at 3, Accession No. 20230929-5322.

proposal to allow individual Load Serving Entities ("LSEs") to "opt out" of the PRA entirely via a formalized opt-out mechanism, because such a provision may allow LSEs to meet their resource adequacy obligations more cost-effectively through a combination of owned capacity resources and long-term bilateral agreements.[3] And PIOs agree with MISO that ultimately its Opt-Out mechanism should "neither unfairly incent opt out, nor force RBDC participation, while also respecting states' rights toward resource adequacy."[4]

Unfortunately, MISO's proposed Opt-Out mechanism does not achieve MISO's stated goals, largely because MISO has proposed to include a so-called "X% Adder," which would require LSEs who opt out of the PRA entirely to secure more capacity than they actually need to meet MISO's 1-in-10 system reliability standard, based on how much excess capacity is procured through the PRA's RBDC mechanism in previous years. As explained in more detail in the attached Affidavit prepared by James. F. Wilson in support of this Protest, MISO's claim that an X% Adder is necessary to neutralize any incentives for LSEs to opt out is not justified by any evidence in the record. In fact, it adds an artificial financial disincentive against LSEs utilizing the Opt-Out mechanism, undermining the suite of choices available to LSEs; and it will impose significant artificial costs on ratepayers of LSEs who do utilize the Opt-Out mechanism, by requiring them to pay for more capacity than is needed to meet their resource adequacy needs.[5] In fact, in its effort to equalize the amount of excess capacity procured across the MISO

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[3] *Id.* at 26-27.

[4] *Id.* at 26.

[5] Affidavit of James F. Wilson in Support of the Comments of Sierra Club, (Nov. 3, 2023), attached hereto as Exhibit A (hereinafter "Wilson Affidavit").

footer, the Adder will actually reduce cost comparability between LSEs who participate in the PRA and those who don't.

This reduction in cost comparability is neither just nor reasonable: it runs contrary to MISO's own stated intention to achieve cost neutrality between participating LSEs and opting-out LSEs, and it harms the efficiency of MISO's capacity market by disincentivizing LSEs from entering into long-term bilateral agreements and self-supply to meet their resource adequacy needs.

II.   LEGAL STANDARD

When a utility or RTO proposes to change its existing rates/tariff pursuant to Section 205 of the Federal Power Act ("FPA"),[6] as MISO is seeking to do with this filing, that entity bears "the burden of proof to show that the increased rate . . . is just and reasonable."[7] To "show that [its proposed change] is just and reasonable," MISO must do more than merely show "an improvement over the [existing] approach," especially where the PJM grid "will remain reliable without implementing the [new] proposal."[8]

In reviewing such tariff amendment proposals, FERC's responsibility is to ensure that "all rules and regulations affecting or pertaining to such rates or charges" must be "just and reasonable" and not "undu[ly] preferen[tial]." Thus, the Commission cannot approve MISO's RBDC proposal if it finds that any element of that proposal is not just and reasonable, or unduly "subject[s] any person to any undue prejudice or disadvantage."[9]

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[6] 16 U.S.C. § 824d(e); *see also* section 35.12 of FERC regulations, 18 C.F.R. § 35.12 (2023).

[7] 16 U.S.C. § 824d (a), (b), (e).

[8] *PJM Interconnection, LLC* ("*IRD Order*"), 180 FERC ¶ 61,809 at P. 47 (2022).

[9] 16 U.S.C. § 824d (a), (b).

III.   ARGUMENT

MISO's RBDC proposal will lead to unjust and unreasonable results, and reduce equity between different parts of MISO, by forcing ratepayers in opt-out regions to pay for more, and more expensive, capacity resources to satisfy MISO's ill-advised quest for excess capacity "comparability" between differently situated LSEs. Fundamentally, imposing the artificial result of a market construct whose purpose is principally to provide market participants with more cost certainty regarding their capacity obligations, back on entities who are not participating in that market, is an unsound strategy. The following sections demonstrate that, and also identify other elements of MISO's Opt-Out Mechanism that further interfere with LSEs' ability to opt out of the PRA. The Commission should not approve any iteration of MISO's RBDC proposal that includes the X% Adder as currently conceived.

A. MISO's Proposed Opt-Out Mechanism Will Disincentivize LSEs from Opting Out of the PRA

MISO first proposed an "Opt-Out" provision to stakeholders in its presentation to the Resource Adequacy Subcommittee on May 24, 2023.[10] Since then, it has published a draft White Paper that explains the Opt-Out option at length, including calculation of the X% Adder, but whose only justification for inclusion of the Adder is a generic statement that "[t]he objective of the opt out mechanism [should be] to neither incentivize opt out, nor force participation."[11]

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[10] MISO, Reliability-Based Demand Curve(s), presentation to Resource Adequacy Subcommittee ("RASC") (May 24, 2023), *available at* https://cdn.misoenergy.org/20230524%20RASC%20Item%2006%20Reliability%20Based%20Demand%20Curves%20Presentation%20(RASC-2019-8)628951.pdf.

[11] MISO, Reliability-Based Demand Curves: Conceptual Design White Paper, Version 1.0, at 19-20 (Sep. 2023), *available at* https://cdn.misoenergy.org/20230906%20RASC%20Item%2002%20Draft%20RBDC%20White%20Paper630104.pdf (hereinafter "MISO RBDC White Paper").

This justification pre-assumes that the X% Adder will do what MISO wants it to do; but it does

not back that assertion with any sort of technical analysis explaining how the X% Adder will

actually impact utility decision making in a way that eliminates systemic bias. MISO has also

defended its inclusion of the X% Adder in other presentations to the RASC, but in no greater

detail: in August, it described the purpose of the X% Adder as "[t]o provide comparable

treatment to LSEs [] who participate in the [PRA] and those who opt-out."[12] And MISO's filing

at the Commission underscores these points: testimony from both Todd Ramey[13] and Zakaria

Joundi[14] describe MISO's goal as neither to incentivize nor disincentivize participation in the

PRA, but fail to elaborate further on how the X% Adder accomplishes that goal.[15]

All of MISO's stated goals and purposes surrounding inclusion and design of the Opt-Out

feature are laudable; and PIOs agree that comparable treatment of all LSEs to avoid unduly

influencing their decision making should be the metric by which MISO's proposal is judged.

But as Mr. Wilson explains in his testimony, MISO is failing its own test, because it is focused

on the wrong measure of comparability. LSEs make resource commitment and other market

participation decisions in order to minimize the net cost of providing reliable power to their

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[12] MISO, Reliability-Based Demand Curve(s), presentation to Resource Adequacy Subcommittee ("RASC") (Aug. 8, 2023), *available at* https://cdn.misoenergy.org/20230808%20RASC%20Item%2002%20Reliability%20Based%20 Demand%20Curves%20Presentation%20(RASC-2019-8)629793.pdf.

[13] Tab C – Prepared Direct Testimony of Todd Ramey (September 29, 2023) (hereinafter "Ramey Testimony") at 19:8-19, Accession No. 20230929-5322.

[14] Tab D - Prepared Direct Testimony of Zakaria Joundi (September 29, 2023) (hereinafter "Joundi Testimony") at 40:18-19, Accession No. 20230929-5322.

[15] PIOs note that MISO's Independent Market Monitor, David B. Patton, has provided an affidavit containing a more comprehensive explanation of the need for the X% adder. Tab F – The Affidavit of David B. Patton, Ph.D. (September 29, 2023) (hereinafter "Patton Affidavit") at PP. 55-60, Accession No. 20230929-5322. That testimony is discussed below.

service areas, which is generally defined as level of system reliability that achieves MISO's 1-in-10-year LOLE standard. Thus, any assessment of comparable treatment must necessarily focus on cost outcomes, not on the total amount of capacity that is procured. As Mr. Wilson explains, once they have confidence they can meet the 1-in-10 LOLE standard, "LSEs should care not about MW [above that standard], but about the capacity cost assigned to them, because that is what impacts their customers."[16]

Comparing financial outcomes is relevant here because LSEs participating in the PRA are differently situated with respect to the costs they face in order to secure capacity exceeding that which is necessary to achieve the 1-in-10 standard. MISO's proposed RBDC is steep, meaning that excess capacity will only be procured through the PRA in a scenario where capacity costs are significantly lower than the Seasonal Net Cost of New Entry ("CONE"). This means further that each additional MW of excess capacity that clears the PRA is cheaper than the last, and further reduces the cost of all previous capacity a participating LSE must obtain through the PRA. And thus, the more capacity PRA-participating LSEs over-procure through operation of the RBDC, the less expensive that over-procurement is likely to be to those LSEs.[17] The opposite phenomenon impacts LSEs who have opted out of the PRA: because they are securing all of their required capacity in advance (i.e., supplementing self-supply with long-term bilateral contracts), their capacity costs will naturally trend toward long-run capacity cost averages, which

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[16] Wilson Affidavit, *supra* note 5, at P. 26.

[17] *Id.* at PP. 25-26. Mr. Wilson explains that the overall cost of capacity drops quickly as more capacity is procured, which makes sense: in a world where there is little or no capacity scarcity, the price of that capacity should be commensurately lower. Because LSEs in MISO are generally vertically integrated utilities, and therefore both sellers and buyers in the PRA market, this fact doesn't have the same direct significance as it does in areas where LSEs may not own generation assets; but the steepness of that decline (from $9 billion if the market clears at PRMR to $2.5 billion if the PRA clears 2.2% above the PRMR) is nonetheless instructive.

do not vary significantly year to year and are much closer to CONE.[18] Furthermore, such LSEs

will naturally secure the cheapest capacity available to them to meet the minimum standard they

are required to meet. This means that any overhead capacity requirements imposed on opting out

LSEs by the X% Adder will necessarily be their most expensive capacity to procure.

The result of this is that imposing excess capacity amounts from the PRA on LSEs who

have opted out will have disparate impacts on the two groups of LSEs, even if the quantity of

excess capacity that is procured is identical. The more excess capacity the PRA clears, the more

inequitable MISO's "comparable treatment" will become, and the more disincentivized LSEs

will be to opt out of the PRA. In other words, MISO's Opt-Out Mechanism creates the exact

market-skewing effect it has consistently stated it is trying to avoid. This makes it an unjust and

unreasonable addition to the RBDC proposal.

B. MISO's Proposed Mechanism for Calculating the X% Adder

Improperly Focuses on Past PRA Results

MISO's proposed Opt-Out Mechanism is further burdened by its focus on past PRA

results at the expense of establishing a more accurate adder. In an effort to provide certainty to

opting-out LSEs, MISO is proposing to set the X% Adder based on past PRA results instead of

current or projected PRA results. For instance, MISO is proposing to pre-establish the amount of

that Adder by season, such that LSEs opting out of the PRA must procure between 1.7 and 3.4

percent additional capacity in each of the four seasons. And MISO wants to freeze any opting-

out LSE's X% Adder value for three-year increments, corresponding to the three-year

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[18] *Id.* at P. 28.

commitments LSEs must make if they select the Opt-Out mechanism.[19] The danger in setting the

X% Adder based on past results, and especially in freezing it for three-year periods, is that

MISO's resource mix is rapidly changing. MISO knows this, and in fact has identified a

"significant decline of the excess reserve margins in the MISO Region" as a major factor in the

wide fluctuation in recent PRA prices.[20] And a rapidly changing resource mix will regularly

render obsolete any X% Adder that is calculated, often well before the expiry of the three-year

lock-in period.

As Mr. Wilson explains, if you set an X% Adder amount that ends up being significantly

higher than the actual excess capacity clearing in the PRA, you will end up skewing the market

further in favor of PRA participants. This is because LSEs opting out of the PRA will see *all* of

their procured capacity, including that required to meet the X% Adder, removed from the supply

of capacity-bidding resources. As a result, capacity that might have been available to enable

PRA participants to meet their PRMR goal will instead be self-scheduled and assigned to opted-

out LSEs to help them exceed it.[21] In a fast-developing, capacity-scarce environment (which is

extremely plausible in the current environment), this could result in a perverse situation where

the PRA clears at or even below PRMR levels, meaning that opted-out LSEs, forced to procure

more capacity than they need, enable PRA participants to scrape by with capacity amounts

significantly below their PRMR, at a time when capacity prices are at their highest. PRA

participants relying on the auction for a substantial portion of their capacity needs would also

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[19] *Id.* at PP. 33-35, 38.

[20] MISO Transmittal Letter, *supra* note 2, at 2.

[21] Wilson Affidavit, *supra* note 5, at PP. 36-37.

lose in this scenario, by being forced to pay artificially inflated per-MW capacity prices, and thereby significantly higher overall capacity payments.

PIOs support Mr. Wilson's suggestion that any approach to setting the X% Adder amount (which, as described above, is inherently problematic) should at least focus on current or projected PRA results rather than on past PRA results.[22] And to further avoid the perverse results highlighted above, no X% Adder calculation methodology should be approved unless it contains a corrective mechanism to "ensure the Opt Out LSEs never have to procure and retain a higher margin than the PRA has cleared."[23] The perverse results associated with a locked-in X% Adder based on past results are simply too large to ignore.

C. MISO's Proposed Opt-Out Adder Contains Biases That Are Consistent with the IMM's Stated Goal of Encouraging PRA Participation

Both of the problems identified above will tend to incentivize LSEs to participate in the PRA with its RBDC, and to disfavor LSEs who would like to secure their own capacity through self-supply and long-term bilateral agreements. But MISO's Proposal further exacerbates that market bias by eliminating the possibility of a negative X% Adder following years in which the PRA clears shy of the PRMR (i.e., with less capacity than is needed to meet the 1-in-10-year standard). This proposal to ignore years in which the PRA clears short of the PRMR (with commensurate high prices) introduces what is effectively a one-way ratchet to the system: MISO will counteract the natural calculation of the X% Adder to prevent it introducing an incentive to

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[22] *Id.* at P. 39.

[23] *Id.* at P. 40.

opt out of the PRA, but it will not intervene to prevent opting-out LSEs from facing adders that force them to procure more capacity than actually clears in the PRA that same year.

This is exactly the type of market-skewing policy MISO claims it is trying to avoid. MISO justifies this further intrusion into the market as necessary to alleviate its concern that "negative values in the adder calculation could unduly incentivize LSEs to elect the RBDC Opt Out."[24] But that justification underscores a central bias in MISO's apparent reasoning: it is extremely focused on avoiding any inadvertent incentives that might prompt LSEs to opt out of the PRA, but spends very little time asking whether its policies might create incentives that prompt LSEs *not* to opt out of the PRA.

Conversely, this market-skewing policy is fully consistent what MISO's Independent Market Monitor, Dr. James Patton, has suggested should be the role of the Opt-Out mechanism. Dr. Patton makes clear in his testimony that he believes MISO should above all prioritize maximizing participation by LSEs in the PRA, because "widespread decisions by LSEs to opt out can only undermine the capacity market"; he views inclusion of the Opt-Out mechanism as a necessary evil to gain support from "a majority of the market participants and members of the Organization of MISO States, Inc."[25] As a result, he provided "extensive feedback in the development of the opt-out provisions to ensure that [the opt-out mechanism] does not substantially undermine the performance of the PRA."[26] And Dr. Patton appears to be pleased

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[24] Joundi Testimony, *supra* note 14, at 45:8-9

[25] Patton Affidavit, *supra* note 15, at PP. 55, 57.

[26] *Id.* at P. 56.

with his success: although he would prefer not to have an Opt-Out mechanism in the first place, he is satisfied that "the opt out provision . . . will not unduly affect the PRA."[27]

PIOs agree with Dr. Patton that the Opt-Out Mechanism as currently construed will not unduly affect the PRA: the X% Adder will likely discourage all but the most determined LSEs from electing the PRA Opt Out Mechanism and satisfying their resource adequacy requirements through a combination of self-supply and long-term bilateral arrangements. However, such an outcome is neither consistent with MISO's stated goal in setting the X% Adder, nor likely to result in MISO LSEs achieving their reliability goals at least cost. As Mr. Wilson explains, in focusing exclusively on what is best for the PRA, Dr. Patton has missed the forest for the trees: overall market efficiency is best served not by maximizing outcomes in one piece of the market, but rather by allowing LSEs to elect their own path to securing their resource adequacy needs with the least policy encumbrance.[28] Indeed, MISO also recognizes the value of providing different options to LSEs, making the bias inherent in the Opt-Out Mechanism less defensible.[29]

D. MISO's Proposed Opt-Out Adder Has No Analogy in other RTO Regions That Have Successfully Implemented a Reliability Based Demand Curve

Mr. Wilson's perspective on the policy questions associated with a "sloped" demand curve is particularly relevant here because he has over two decades of experience evaluating PJM Interconnection, L.L.C.'s ("PJM's") and other RTO regions' capacity markets, including PJM's

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[27] *Id.* at P. 60.

[28] Wilson Affidavit, *supra* note 5, at PP. 10-11, 16-18.

[29] *Id.* at P. 9 (citing to both MISO's Transmittal Letter and the testimony of Todd Ramey as examples of MISO acknowledging the importance of providing LSEs with multiple options).

sloped demand curve.[30] As he notes in his affidavit, that experience includes tracking similar discussions that have occurred at PJM with respect to its (substantially similar) Fixed Resource Requirement, which is the closest analogy to MISO's proposed Opt-Out mechanism because it also represents a complete self-removal from the RTO-operated capacity market.[31] As Mr. Wilson relates, although some stakeholders have raised the same arguments of comparability between market-participating LSEs and opting-out LSEs as justified MISO's proposed X% Adder, those arguments have been repeatedly rejected or ignored by PJM stakeholders.[32] PJM's capacity market has worked well for nearly two decades with a Fixed Resource Requirement option that obligates LSEs to procure exactly the amount of reserve requirement PJM has identified as needed to meet the 1-in-10 standard, and no more.

MISO is asking the Commission to approve a novel, untested, and inadequately supported Opt-Out Mechanism that will improperly bias LSEs in favor of participating in the PRA, and force those who don't to procure more capacity than is needed to meet MISO's system reliability standards. The potential market-skewing results from this proposal run entirely in the direction of artificially increasing the cost and amount of capacity that MISO LSEs will procure, which is both improper and problematic from a regional resource management perspective. Thus, the overall proposal is unjust and unreasonable, in particular disadvantaging LSEs who opt out of the PRA as compared to LSEs who do not. Per its review obligations under Section 205,

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[30] *Id.* at P. 3.

[31] *Id.* at P. 6.

[32] *Id.* at P. 19.

the Commission should reject MISO's Proposal and require it to come back with an Opt-Out

mechanism that offers truly comparable treatment to PRA participants and opted-out LSEs alike.

IV.   CONCLUSION

For the foregoing reasons, PIOs respectfully request that the Commission deny MISO's

Reliability Based Demand Curve filings, with instructions to correct its problematic Opt-Out

Mechanism.

Dated: November 3, 2023.   Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing has been served in accordance with 18 C.F.R. § 385.2010 upon each party designated on the official service lists in these proceedings listed above, by email.

Dated: November 3, 2023.

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EXHIBIT A

Affidavit of James F. Wilson in Support of the Comments of Sierra Club

(November 3, 2023)

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Midcontinent Independent System Operator, Inc.'s Reliability Based Demand Curve	)))	**Docket No. ER23-2977**

AFFIDAVIT OF JAMES F. WILSON
IN SUPPORT OF THE COMMENTS OF
PUBLIC INTEREST ORGANIZATIONS

Dated: November 3, 2023

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AFFIDAVIT OF JAMES F. WILSON
IN SUPPORT OF THE COMMENTS OF
PUBLIC INTEREST ORGANIZATIONS

I. Introduction

1.   My name is James F. Wilson. I am an economist and independent consultant doing business as Wilson Energy Economics. My business address is 4800 Hampden Lane Suite 200, Bethesda, MD 20814.

2.   I have forty years of consulting experience in the electric power and natural gas industries. Many of my past assignments have focused on the economic and policy issues arising from the introduction of competition into these industries, including restructuring policies, resource adequacy, market design, market analysis and market power. I have submitted affidavits and presented testimony in proceedings of the Federal Energy Regulatory Commission ("Commission"), state regulatory agencies, and U.S. district court. I hold a B.A. in Mathematics from Oberlin College and an M.S. in Engineering-Economic Systems from Stanford University. My curriculum vitae, summarizing my experience and listing past testimony, is Attachment JFW-2 attached hereto.

3.   I have been involved in electricity restructuring and wholesale market design for over twenty years in the mid-Atlantic region, New England, Midwest, Ontario, California, Russia, and other regions. Since PJM Interconnection, L.L.C. ("PJM") proposed the Reliability Pricing Model ("RPM") capacity construct in 2005, I have prepared numerous affidavits, reports, and analyses of RPM and RPM-related issues, including the Fixed Resource Requirement opt-out provisions, and I have also been

involved in resource adequacy and capacity market issues in various other regions during this period.

4.   On September 29, 2023, the Midcontinent Independent System Operator, Inc. ("MISO") proposed in this docket to enhance its Resource Adequacy construct through the implementation of a Reliability Based Demand Curve ("RBDC") in its Planning Resource Auction ("PRA"). MISO's filing also provides a mechanism to opt out of the RBDC ("Opt Out Mechanism") to allow Load Serving Entities ("LSEs") to remove all of their load from the PRA Auction Clearing Price established by the RBDC curves if they so choose.

5.   This affidavit was prepared at the request of Sierra Club, Natural Resources Defense Council, and Sustainable FERC Project ("Public Interest Organizations"). My assignment was to review and provide recommendations with regard to the proposed RBDC Opt Out Mechanism. For this purpose I reviewed MISO's filing, the supporting direct testimony of MISO staff Todd Ramey and Zakaria Joundi, the direct testimony of Drs. Kathleen Spees, Samual A. Newell, and Linquan Bai of the Brattle Group, and the affidavit of David B. Patton, PhD of Potomac Economics, Ltd, who serves as MISO's Independent Market Monitor.

II.   Summary and Recommendation

6.   After reviewing the full package of proposed changes to MISO's resource adequacy construct, I support the proposed introduction of sloped demand curves and the inclusion of the new RBDC Opt Out option. The features of the RBDC Opt Out Mechanism are very similar to PJM's Fixed Resource Requirement ("FRR") opt out rules

that have been applicable to PJM's Reliability Pricing Model ("RPM") sloped demand curve capacity construct since RPM first went into effect eighteen delivery years ago.

7.   However, MISO proposes one novel detail in its RBDC Opt Out Mechanism that is not found in the FRR rules: the proposal to include an RBDC Opt Out Adder, an additional quantity of capacity beyond what is needed for reliability that LSEs electing the Opt Out option would be required to procure.[1] Based on my evaluation described in the remainder of my affidavit, I conclude the following:

    i.   MISO and its witnesses have not provided any valid rationale for the Opt Out Adder provision;

    ii.   If "comparability" is a concern, when properly considered to be about cost, not quantities, it is clearly accomplished by the sloped demand curve (PRA entities pay a shrinking fraction of total capacity cost when the PRA clears excess);

    iii.   The proposed approach to calculating the Adder could have unintended and inefficient consequences.

8.   I recommend removing the RBDC Opt Out Adder provision. In the alternative, I recommend rules that ensure the Opt Out LSEs never have to procure and retain a higher reserve margin than the PRA has cleared.

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[1] MISO Tariff Filing: Reliability Based Demand Curve (September 29, 2023) (hereinafter "MISO Transmittal Letter") at 27, Accession No. 20230929-5322; Tab C – Prepared Direct Testimony of Todd Ramey (September 29, 2023) (hereinafter "Ramey Testimony") at 19, Accession No. 20230929-5322; Tab B – Clean Tariff (hereinafter "MISO Tariff") at §§ 69A.7.6, 69A.9.1.

III.   MISO and Stakeholders Recognize the Value of Providing Multiple Options for Satisfying Resource Adequacy Requirements

9.   While MISO's filing focuses primarily on changes to the demand curve used in the PRA capacity auctions, the filing also proposes a new RBDC Opt Out Mechanism under which LSEs can arrange to satisfy their resource adequacy obligations outside of the PRA auction.   MISO recognizes the value of providing options and emphasizes that the RBDC Opt Out Mechanism is an additional option (there is also a Fixed Resource Adequacy Plan ("FRAP") option).[2] In discussing the benefits of these options, MISO and witness Ramey focus on the preservation of state authority over resource adequacy requirements and resource planning decisions.   However, opt out mechanisms (such as the RBDC Opt Out, FRAP, and PJM's FRR) also preserve LSEs' option to satisfy resource adequacy requirements through owned capacity resources and long-term bilateral arrangements.   Under a bilateral contract, LSEs can just procure capacity, or procure capacity together with energy and ancillary services; they can procure for any duration, with any price risk-sharing arrangements, and with any other provisions that meet both parties' needs.   By contrast, the capacity construct is essentially a capacity spot market, offering only short-term pricing of a standard product.   Having both the bilateral market under an opt out provision, and the capacity construct, leads to a broader set of options for LSEs, contributing to more efficient overall provision of resource adequacy than if LSEs only had access to the bilateral market, or only to the PRA construct.

10.   It is also true that each optional approach to satisfying resource adequacy would likely be more efficient if it involved greater volumes – larger markets are generally more efficient and competitive. So I don't disagree with Dr. Patton's view that "the PRA would perform best and provide the most efficient incentives for all generators and LSEs

in the MISO region if it included all supply and all demand."[3] Similarly, the bilateral

market would perform best and provide the most efficient incentives if all transactions were

occurring entirely there rather than some occurring through other mechanisms, such as

PRAs. However, Dr. Patton's view that "it would be preferable to not allow LSEs to opt

out of the PRA"[4] does not follow; again, having both options available and operating

efficiently is the more efficient arrangement. I believe Dr. Patton's view reflects his

responsibility for monitoring and evaluating the MISO-administered wholesale markets,

including the resource adequacy construct. However, this perspective is less concerned

about the efficiency of the overall market, which depends on how all of the available

options are used to satisfy different participants' preferences and needs.

11.   My view is that resource adequacy in the MISO footprint will be met most

efficiently, meaning at least cost, if market participants have multiple options, and if each

of those options operates efficiently and is not encumbered by any unnecessary restrictions

or requirements.

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[2] MISO Transmittal Letter at 26-27; Ramey Testimony, *supra* note 1, at 17-21. The FRAP option is very different from both the RBDC Opt Out and PJM's FRR; LSEs can elect FRAP on a year-by-year basis (RBDC Opt Out and FRR have multi-year lock-ins), and for a portion of their requirements (RBDC Opt Out and FRR are only for 100% of requirements). This affidavit focuses on the RBDC Opt Out.

[3] Tab F – The Affidavit of David B. Patton, Ph.D. (September 29, 2023) (hereinafter "Patton Affidavit") at P. 55, Accession No. 20230929-5322.

[4] *Id.* at P. 60.

IV. Description of the Proposed RBDC Opt Out Mechanism

12. The proposed RBDC Opt Out Mechanism has the following features:[5]

    i. LSEs electing this option must submit an opt out plan for 100% of their load;

    ii. LSEs electing this option will be subject to a three-year minimum stay (the RBDC Opt Out Lock-In Period);

    iii. These LSEs' opt out plans must meet their coincident peak forecast plus the applicable Planning Reserve Margin plus an additional percentage, the RBDC Opt Out Adder;

    iv. The RBDC Opt Out Adder established for the first year when an LSE opts out is fixed for the remaining two years of the LSE's Lock-In Period;

    v. LSEs electing this option and failing to provide the required capacity will be subject to a Deficiency Charge;

    vi. The PRA is not adjusted for RBDC Opt Out quantities, but LSEs under this option are not subject to the price or quantity established in the PRA;

    vii. LSEs electing this option can sell any excess capacity they may have into the PRAs.

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[5] Tab D - Prepared Direct Testimony of Zakaria Joundi (September 29, 2023) (hereinafter "Joundi Testimony") at 40-41, Accession No. 20230929-5322; MISO Tariff at §§ 69A.7.6, 69A.9.1.

13.   The RBDC Opt Out Mechanism is very similar to PJM's FRR opt out provision that has been part of the RPM design since its beginning in 2006.[6] The primary differences in the FRR mechanism are the following:

    i.   The FRR lock-in period is five years rather than three;

    ii.   FRR entities provide only forecast peak load plus reserve margin, there is no Adder;

    iii.   FRR quantities plus reserve margin, and FRR supply, are removed from the RPM auctions.

14.   Of these differences, the proposed RBDC Opt Out Adder is the most significant; PJM's FRR rules have never included such an adder.

V.   MISO and its Witnesses Have Failed to Provide Any Reasonable Rationale for the RBDC Opt Out Adder

15.   MISO's filing states that the RBDC Opt Out Adder has been proposed in order to provide "comparable treatment" for LSEs who participate in the PRA and those who opt out.[7] The "comparable treatment" refers to the excess capacity typically procured under sloped capacity demand curves; the RBDC Opt Out Adder is intended to require Opt Out entities to also procure some amount of excess capacity. MISO's filing also states that the objective of the Opt Out Mechanism "is to neither unfairly incent opt out, nor force

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[6] PJM Reliability Assurance Agreement Among Load-Serving Entities in the PJM Region (hereinafter "RAA"), Schedule 8.1, Fixed Resource Requirement Alternative, *available at* https://www.pjm.com/directory/merged-tariffs/raa.pdf.

[7] MISO Transmittal Letter at 27.

RBDC participation, while also respecting states' rights toward resource adequacy."[8] While it is unclear how "fairness" enters in here, this statement would seem to be another way of raising the "comparable treatment" question. Witness Ramey uses the same words to justify the RBDC Opt Out Adder, without any further explanation.[9] The Joundi Testimony describes mechanics but not rationale.

16. Only Dr. Patton provides a rationale for the RBDC Opt Out Adder explained in any detail. He states as follows:

> 56. I have provided extensive feedback in the development of the opt-out provisions to ensure that it does not substantially undermine the performance of the PRA. I believe the opt-out provision proposed by MISO achieves this objective. An LSE that wishes to opt-out of the PRA must self-supply its planning resource requirement plus a defined percentage surplus. Ideally, this defined surplus will reflect the expected surplus that is likely to clear in the PRA during the opt out timeframe. The PRA will then clear with the opt out supply and demand self-scheduled. Assuming the self-supplied generation is economic, the PRA will clear the same level of surplus and produce the same prices. However, if the defined opt-out surplus is lower than the cleared market surplus, the entities that did not opt out will procure the difference. Alternatively, if the defined surplus is higher than the cleared market surplus, the LSEs participating in the market will be obligated to pay for less capacity.

> 57. Therefore, setting the defined surplus for LSEs choosing to opt out at a level reflecting the expected market surplus will ensure comparability between entities that opt out of the market and those that do not. I believe it is very important to avoid creating a positive incentive for LSE's to opt out in any year since widespread decisions by LSEs to opt out can only undermine the capacity market.[10]

17. This quote, which is the only detailed explanation of a rationale for the

RBDC Opt Out Adder included in MISO's filing, makes a few things clear:

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[8] *Id.* at 26.

[9] Ramey Testimony, *supra* note 1, at 19.

[10] Patton Affidavit, *supra* note 3, at PP. 56-57.

i. Dr. Patton is concerned about "the performance of the PRA", not of the broader market inclusive of the PRA and bilateral markets.

ii. Dr. Patton wishes to discourage the opt out, to "avoid creating a positive incentive" to opt out.

iii. "Comparability" is about quantities, there is no discussion of costs.

18. I disagree that it is appropriate to kneecap one option available to LSEs (which, by imposing excess capacity, the RBDC Opt Out Adder does) in order to "avoid creating a positive incentive" for LSEs to elect that option over another (much more limited) option. Especially when comparing the highly administrative, standard-product capacity market to the much broader possibilities of bilateral markets, "comparability" is hard to define because the options are so very different.

19. Under PJM's similar FRR construct, LSEs who opt out have been required to satisfy just the identified, one-day-in-ten-years based reliability requirement, adjusted for locational requirements, nothing more or less, with no connection to what the capacity market clears under its sloped demand curve; this rule has been in place for 18 delivery years.[11] A few stakeholders have from time to time floated this "comparability" argument and tried to impose the market's excess capacity on FRR entities, and PJM and PJM stakeholders have repeatedly ignored or rejected the idea.[12]

20. The next section of my affidavit further explains why the excess capacity cleared under the sloped demand curves of administrative capacity constructs should not

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[11] RAA, *supra* note 6, Schedule 8.1, Fixed Resource Requirement Alternative.

[12] The PJM Board rejected this idea in its memo to stakeholders following the recent Critical Issue Fast Path process. *See* BOARD LETTER SUBSTANTIVE DIRECTION (September 27, 2023) at 5, *available at* https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20230927-pjm-board-letter-re-its-decision-within-the-cifp-ra.ashx.

be imposed on entities that opt out of those constructs; this notion of "comparable treatment" should be rejected. Then Section VII explains that, while "comparable treatment" should be rejected, if this is a concern, the focus should be on *costs,* not quantities, and this also leads to rejection of the RBDC Opt Out Adder. The final section discusses flaws in the proposed approach to setting the RBDC Adder, and proposes alternatives, should the Commission choose to approve the Adder in some form.

VI. **Acquisition of Reserve Margins in Excess of, or Short of, Reliability Requirements Is an Outcome Peculiar to Capacity Constructs with Sloped Demand Curves; It Is Inappropriate to Impose this Unchosen Outcome onto LSEs Using Other Options**

21.   MISO and all or nearly all stakeholders now support moving to sloped demand curves under the capacity construct, and I agree this is the right way to go. Sloped demand curves provide greater price stability, and prices that signal whether capacity is relatively in excess or in short supply, helping to guide decisions about building new or retiring existing capacity. This also mitigates the incentive and ability to exercise market power. The benefits of the sloped demand curve are explained in MISO's filing and the supporting testimony and affidavits.

22.   Sloped demand curves also usually result in auction-cleared quantities different from the target quantities considered needed for resource adequacy; generally higher cleared quantities, but they can also be lower. Under PJM's capacity construct, for instance, the cleared quantities have chronically been much higher than targets (more than six percent in excess of targets, over the past six delivery years).[13] This unpredictable

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[13] *See, e.g.*, Wilson, James F. Over-Procurement of Generating Capacity in PJM: Causes and Consequences, (February 2020) (hereinafter "Wilson 2020") at 4, available at

variability in the actual capacity procurement quantity is an outcome of the use of sloped demand curves; it is not an explicitly desired outcome, especially when an enormous excess results. I have argued that the large excess capacity procurement resulting from PJM's sloped demand curve harms consumers and markets.[14]

23. However, again, this quantity variability is a necessary evil to gain the benefits of the sloped demand curve. Because this attribute (quantity variability, and usually over-procurement) is peculiar to the administrative capacity construct with a sloped demand curve, there is no basis for attempting to impose or spread this undesirable over-procurement attribute to LSEs who have chosen to meet their obligations in another manner. For this reason alone, the RBDC Opt Out Adder provision should be rejected.

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https://www.sierraclub.org/sites/default/files/blog/Wilson%20Overprocurement%20of%20Capacity%20in%20PJM.PDF, *and* Wilson, James F., Maintaining the PJM Region's Robust Reserve Margins - A Critique of the PJM Report: Energy Transition in PJM: Resource Retirements, Replacements and Risks (May 26 2023), *available at* https://www.sierraclub.org/sites/www.sierraclub.org/files/2023-05/Wilson%20R4%20Report%20Critique%20Revised.pdf.

[14] Wilson 2020, *supra* note 13, at 10-12; *see also* Aggarwal, Sonia, Power Markets in Transition: Consequences of Oversupply and Options for Market Operators (March 2019) at 3, available at https://doi.org/10.1007/s40518-019-00123-6.

VII. **"Comparable Treatment" Should Focus on Cost, and it is Accomplished Through the Sloped Demand Curve Without an Adder**

24.   While I see no basis for adjusting the RBDC Opt Out Mechanism based on some attribute of the capacity construct that is not relevant to bilateral arrangements under an Opt Out Mechanism, if there is concern about "comparability," the focus should be on capacity cost, not on nominal capacity purchase quantities; and this leads to an additional reason to reject the RBDC Opt Out Adder.

25.   I understand that concerns have been raised that if there is no Opt Out Adder, and the PRA clears excess capacity, the LSEs participating in the PRA would have to bear the entire excess quantity. So, for example, if the PRA excess is 2%, and half of the LSEs have opted out, those remaining in the market would all be assigned about 4% excess.

26.   However, ultimately, LSEs should care not about MW, but about the capacity cost assigned to them, because that is what impacts their customers. MISO's proposed sloped demand curves are fairly steep, meaning that as the cleared quantity increases, the PRA clearing price decreases by a much larger percentage than the change in quantity. This means that total capacity cost (cleared price times cleared quantity) declines sharply as the cleared quantity rises.

27.   For example, for the System-wide demand curves, summer season (shown in Figure 1, below),[15] the total cost of summer capacity when at the PRMR, based on the PRA price, is about $9 billion (133 GW x $753 Net CONE price x 90 days). If instead

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[15] Tab E – The Brattle Group Testimony (September 29, 2023), at 7, Figure 1, Accession No. 20230929-5322; MISO Transmittal Letter at 12.

about 1.1% excess is cleared at $400/MW-day, the total cost declines to $5 billion; and if

2.2% excess is cleared at $200/MW-day, the total cost declines to $2.5 billion.

Figure 1: System-wide Summer Demand Curve (from Brattle Testimony, Figure 1 page 7)
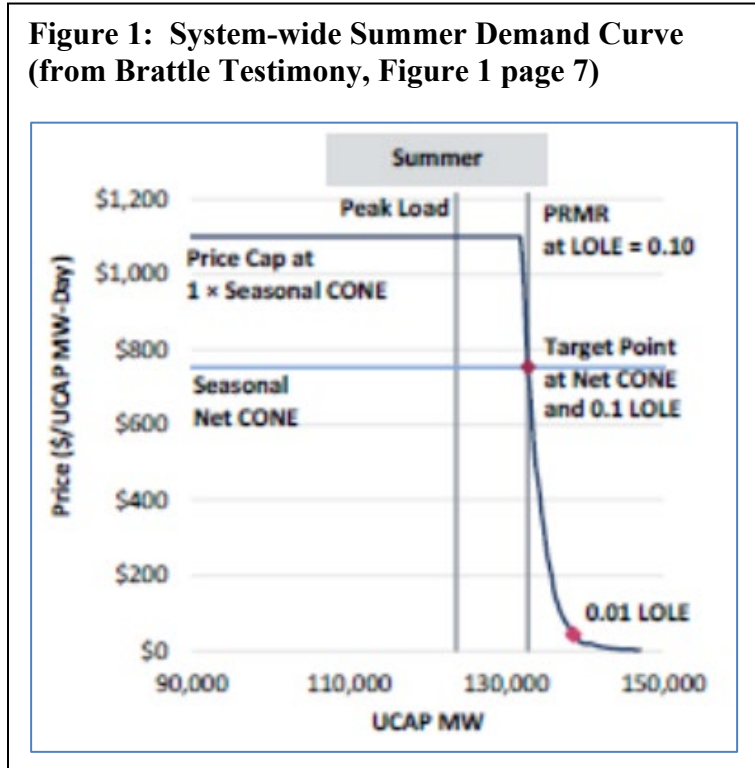
28.   In MISO many LSEs are vertically integrated and also acquire capacity

under bilateral arrangements, so most of the capacity does not transact at the PRA price.

The cost of capacity not priced at the PRA price is not known, however, we can make some

general conclusions about these costs. Owned capacity, and long-term bilateral contracts,

will generally reflect long-term average capacity costs and not vary much year to year.

Shorter term adjustments to capacity quantities (to satisfy requirements, or in selling excess

into the markets) will reflect shorter term capacity market conditions. Thus, it is probably

safe to say that LSEs who have chosen to opt out are paying, on average, something close

to long-run average capacity costs, and this does not vary much year to year, or reflect

capacity market outcomes very much. Many LSEs who have not opted out will also have capacity whose costs reflect long-term arrangements.

29.   Because, as the capacity construct clears larger quantities, the price and cost of PRA-priced capacity declines, but total capacity cost under opt out is likely stable, the *larger* the excess quantity cleared under the capacity construct, the *smaller* the share of *total* capacity cost borne by the LSEs using the capacity construct, and the *larger* the share of total cost borne by the opt out entities. So the LSEs participating in the PRA are already paying a shrinking share of total capacity cost for procuring excess capacity. This creates a strong disincentive to opt out if the PRAs are expected to clear long, and no additional adjustment for "comparability" is needed or appropriate.

30.   For example, suppose again that the PRA and Opt Out quantities are the same, and suppose that if the PRA clears at the PRMR both groups are paying the same total cost for summer capacity, $4.5 billion (half of the $9 billion total mentioned above). Suppose further that LSEs participating in the PRA have one-third of their capacity priced at the PRA price, two-thirds under long-term arrangements. If the PRA clears 2.2% excess at $200/MW-day, the PRA entities' average cost declines to $3.4 billion, so they are now paying only about 43% of total capacity cost ($3.4/($3.4+$4.5)).

31.   This shows that "comparability," to the extent that is a concern (I've argued that it shouldn't be), and disincentives to opt out, are already happening under the sloped demand curve; to the extent the LSEs relying on the capacity construct are clearing excess quantities, they will actually be paying a lower price for capacity, and a shrinking fraction of the total capacity cost.

VIII. **The Proposed Approach to Setting the RBDC Opt Out Adder is Flawed and Could Have Unfair Impacts Contrary to the Notion of "Comparability"**

32.   I recommend that the RBDC Opt Out Adder be rejected outright because it is based on flawed concepts, and the Opt Out already preserves comparability via the declining price under the sloped demand curve. However, the Commission should also be aware that the proposed approach to setting the Adder could lead to unintended and undesirable consequences.

33.   MISO proposes to set the RBDC Opt Out Adder, at least for the first delivery year in which it will be used, based on "historic" [sic] PRA outcomes.[16] This Adder would be frozen for the three years of LSE's Opt Out Lock-In Period.

34.   While there are some locational and other details, MISO generally proposes to calculate the average excess cleared quantity over the most recent three planning years. The example provided leads to RBDC Opt Out Adders of 3.1% for the Summer period, 3.4% for Fall, 2.7% for Winter, and 1.7% for Spring.[17] This means that LSEs electing the RBDC Opt Out option would be required to procure not just peak load and the required reserve margin, but this additional percentage of peak load by season.

35.   MISO does not propose to adjust the RBDC demand curves based on the RBDC Opt Out Adder.[18] Nor does MISO propose any changes to rules regarding how offers or made, or market monitoring or mitigation.[19] This means that the portfolios of Opt Out LSEs will be represented in the PRA auctions, presumably priced at zero. This also

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[16] MISO Transmittal Letter at 27; Joundi Testimony, *supra* note 5, at 44.

[17] Joundi Testimony, *supra* note 5, at 44, Figure 10.

[18] *Id.* at 46.

[19] *Id.* at 36.

means that the higher the RBDC Opt Out Adder, the larger the amount of resource that is acquired by Opt Out LSEs and essentially removed from the PRA for price-setting purposes.

36.   Under the proposed PRA Settlement rules, the LSEs relying on the capacity construct would be assigned quantities calculated by subtracting the Opt Out LSE quantities from the total cleared quantity.[20] While most recent PRAs have cleared excess capacity in most or all zones, at the present time the resource mix in MISO, as in many other regions, is undergoing profound change, suggesting that future PRAs could potentially clear much lower excess capacity quantities, or no excess at all.

37.   Consider an example where the RBDC Opt Out Adder is 3%, and the combined peak loads of the Opt Out LSEs and PRA LSEs are roughly equal, that is, roughly half the market has opted out and half is priced through the PRAs. Now suppose the PRA clears right at the reliability target (no excess at all). Then the PRA LSEs would be assigned quantities about 3% *below* the target, such that the total assigned quantity equals the total cleared quantity, and equals the reliability target. This outcome would stand "comparability" on its head, with the Opt Out LSEs, who have likely arranged in advance to satisfy their requirements on a long-term basis, required to purchase excess that they do not need or want, while the PRA LSEs, relying on the short-term capacity spot market that in this example has failed to attract any excess capacity, are assigned responsibility for 3% less than the reliability target.

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

38.   Even worse, MISO proposes that the RBDC Opt Out Adder, once set for an LSE's first planning year under the Opt Out Mechanism, would be frozen for the three years of the LSE's Opt Out Lock-In Period.[21] If the above scenario occurred (the opt out LSEs are required to acquire excess while the market clears at criteria), it could occur three years in a row.

39.   Accordingly, I further recommend, if the Commission is inclined to approve an RBDC Opt Out Adder, that it at least require a different approach to setting the Adder. An approach based on a forecast or estimate of the PRA clearing result would render the above scenario less likely.

40.   In addition, I recommend that the Commission require rules that ensure the Opt Out LSEs never have to procure and retain a higher reserve margin than the PRA has cleared. This could be accomplished by permitting the Opt Out LSEs to offer their RBDC Opt Out Adder quantities into PRAs at prices that will clear, relieving them of the excess, to the extent the PRA clears at excess capacity quantities lower than the Adder percentages.

41.   This concludes my affidavit.

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[21] MISO Tariff at § 69A.9.1.