UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

North Dakota Public Service Commission
Montana Public Service Commission
Arkansas Public Service Commission
Mississippi Public Service Commission
Louisiana Public Service Commission

Docket No. EL25-___-000

Complainants,

v.

Midcontinent Independent System Operator, Inc.,

Respondent

COMPLAINT OF THE CONCERNED COMMISSIONS AND REQUESTS FOR EXPEDITED ACTION AND FAST TRACK PROCESSING

July 30, 2025

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Pursuant to Sections 206, 306, and 309 of the Federal Power Act (FPA) and Rules 206 and 207(a)(5) of the Federal Energy Regulatory Commission's (FERC) Rules of Practice and Procedures,[1] the Concerned Commissions[2] hereby submit this Complaint and request for Expedited Action and Fast Track Processing against the Midcontinent Independent System Operator, Inc. (MISO) and the MISO Board of Directors (Board) for violating the MISO Open Access Transmission, Energy and Operating Reserve Markets Tariff (Tariff).[3] In reliance upon MISO's miscalculation of benefits and a defective business case, the Board approved[4] approximately $22 billion in various transmission projects (Tranche 2.1) as Multi-Value Projects (MVP).[5] Because Tranche 2.1 does NOT

[1] 16 U.S.C. §§ 824e, 825e, and 825h; 18 C.F.R. §§ 385.206 and 385.207(a)(5).
[2] The Concerned Commissions include the North Dakota Public Service Commission, the Montana Public Service Commission, the Arkansas Public Service Commission, the Mississippi Public Serivce Commission, and the Louisiana Public Service Commission.
[3] *See* MISO Tariff, Attachment FF § II.C.2.
[4] *MISO Board Approves Historic Transmission Plan to Strengthen Grid Reliability*, December 12, 2024. https://www.misoenergy.org/meet-miso/media-center/2024/miso-board-approves-historic-transmission-plan-to-strengthen-grid-reliability/.
[5] *See* MISO Tariff, Attachment FF, § II.C.4.

provide benefits equal to or in excess of forecasted costs (*i.e.,* a benefit to cost ratio of 1.0 or greater), these projects fail the MVP criteria. Absent reclassification of the Tranche 2.1 projects under another FERC-accepted transmission project type with a FERC-accepted cost allocation methodology, MISO has no authority to direct their construction.

If states and/or utilities that will rely on Tranche 2.1 projects to meet their individual renewable energy and decarbonization goals agree to be responsible for their costs, then MISO may direct these projects to be built under the Tariff.

The Concerned Commissions respectfully request that FERC (i) find that MISO and the Board violated the Tariff, (ii) direct the Board to declassify Tranche 2.1 projects as MVPs, and (iii) direct MISO to file business cases supporting all future MVPs.

I. INTRODUCTION AND SUMMARY

MISO has developed and relied upon unreasonable benefit metrics that substantially overstate the benefits used to justify $22 billion of transmission investment, which violates the Tariff. The metrics relied upon were either added to or adjusted from the metrics used previously (*i.e.,* to justify Tranche 1) because the existing metrics were unable to show benefits greater than costs. The new and revised benefit metrics are based on patently unreasonable assumptions that have not been accepted by FERC. MISO and the Board ignored concerns raised by stakeholders and the Independent Market Monitor (IMM) throughout the stakeholder process. When the IMM identified major defects with MISO's assumptions, rather than address those concerns, the Board ordered staff to challenge the IMM's authority to raise these concerns within its scope as the IMM.[6]

[6] *See Midcontinent Indep. Sys. Operator, Inc.*, Petition for Declaratory Order, Docket No. EL25-80-000, P 17 (filed May 7, 2025).

Fortunately, FERC issued an order on July 18, 2025, denying MISO's petition.[7] FERC disagreed with MISO and MISO Transmission Owners, finding that the "Tariff authorizes the IMM to review and analyze MISO's transmission planning activities and emphasizes that the IMM should consider the competitive or other market *impacts* of any MISO action governing or affecting any of the Markets and Services."[8]

Nevertheless, absent this Complaint, FERC will have no opportunity to consider the concerns raised by stakeholders and the IMM about MISO's process and methodologies that led to the misclassification of $22 billion worth of network upgrades as MVPs.

Dr. William Hogan proffers testimony demonstrating that MISO's application of the Tranche 2.1 metrics is designed to justify projects that do not qualify as MVPs and likely have costs that substantially exceed a reasonable expectation of their benefits.[9]

II. BACKGROUND

A. Description of Complainants

The Concerned Commissions are a group of state regulators with jurisdiction over public utilities that participate as MISO Transmission Owners,[10] Load Serving Entities,[11] or both. The Concerned Commissions represent states that are NOT relying on Tranche 2.1 projects to meet their resource adequacy requirements, state renewable energy or decarbonization goals. These states and their utilities have or are building new generation, either close to load or where existing transmission can provide delivery to load, that is

[7] *See Midcontinent Indep. Sys. Operator, Inc*., 192 FERC ¶ 61,055 (2025) (Order on Petition).
[8] *Id.* at P 106.
[9] *See* Prepared Direct Testimony of William Hogan, Exhibit No. 1 (Hogan Test.).
[10] "Transmission Owner" means each "member of the ISO whose transmission facilities (in whole or in part) make up the Transmission Provider Transmission System." *See* MISO Tariff, Module A, § 1.T.
[11] "Load Serving Entity" means any entity that has undertaken an obligation to serve Load for end-use customers by statute, franchise, regulatory requirement or contract for Load located within or attached to the Transmission System, including but not limited to purchase-selling entities and retail power marketers with the obligation to serve Load. *See id.* § 1.L.

consistent with their integrated resource plans (IRPs) or similar state processes. They have no need for the transfer capability that Tranche 2.1 will offer nor any interest in subsidizing Tranche 2.1 costs to advance the clean energy and decarbonization goals of other states in MISO.

B. Description of Respondents

MISO is a FERC-approved Regional Transmission Organization (RTO) responsible for operating the electric grid and administering wholesale electricity markets within a footprint in the central United States.[12] MISO is a non-stock, not-for-profit corporation.[13] MISO is a "public utility" under the FPA with its activities and Tariff subject to FERC's exclusive oversight and regulation.[14] No state commission has jurisdiction over MISO. Within its geographical footprint, MISO is responsible "for planning, and for directing or arranging, necessary transmission expansions, additions, and upgrades . . . and coordinat[ing] such efforts with the appropriate state authorities."[15] As part of its responsibilities, MISO must develop the MISO Transmission Expansion Plan (MTEP). The MISO Board must review and approve the MTEP.[16] Approval of the MTEP by the MISO Board "certifies it as [MISO's] plan for meeting the transmission needs of all stakeholders subject to any required approvals by federal or state regulatory authorities."[17]

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[12] *See Midwest Indep. Transmission Sys. Operator, Inc.*, 97 FERC ¶ 61,326 (2001).
[13] *See MTEP24 Transmission Portfolio Full Report, Midcontinent Independent System Operator, Inc.,* https://cdn.misoenergy.org/MTEP24%20Full%20Report658025.pdf at 2 (MTEP24 Report) (describing MISO as an independent, 501(c)(4) not-for-profit organization).
[14] *See* 18 C.F.R. § 35.34(j)(1); 16 U.S.C. § 824(e).
[15] 18 C.F.R. § 35.34(k)(7).
[16] MISO Tariff Attachment FF, § I ("This Attachment FF describes the process to be used by the Transmission Provider to develop the MISO Transmission Expansion Plan ('MTEP'), subject to review and approval by the Transmission Provider Board.").
[17] *Id.* § VI.C.

Importantly, and of significant concern, MISO is completely autonomous. Its operations are not subject to any state's jurisdiction. Concerns raised by stakeholders, including state commissions, are advisory only and MISO is at liberty to disregard them. FERC has jurisdiction over rates, terms, and conditions of service that MISO may file but is not routinely involved nor does it provide any oversight over MISO's operations, including its transmission planning determinations and benefit analyses used to justify the transmission investments. Absent a referral by the IMM or a complaint filed by Stakeholders, MISO is free to subjectively interpret Tariff provisions broadly to operate as it sees fit. For example, as discussed above, MISO recently filed an unsuccessful petition at FERC to seek a contract interpretation that would preclude the IMM from identifying glaring flaws in the MISO transmission planning process, including the benefit metrics that are the subject of this Complaint.[18]

III. FACTUAL BASIS FOR COMPLAINT

A. MISO Regional Transmission Planning Process

Each year, MISO develops a regional transmission expansion plan, known as the MTEP.[19] The MTEP is "[a] long range plan used to identify expansions or enhancements to the Transmission System to: i) support efficiency in bulk power markets; ii) facilitate compliance with documented federal and state energy laws, regulatory mandates, and regulatory obligations; and iii) maintain reliability."[20] To prepare the annual MTEP, MISO reviews the local planning activities of the individual Transmission Owners and prepares several models of the power system to determine how to meet the Transmission Owners'

[18] *See Midcontinent Indep. Sys. Operator, Inc.*, Petition for Declaratory Order, Docket No. EL25-80 (filed May 7, 2025).
[19] *See Midcontinent Indep. Sys. Operator, Inc.,* Testimony of Jeremiah Doner, Docket No. ER22-995-000 at 4 (Filed Feb. 4, 2022).
[20] *See* MISO Tariff, Module A, § 1.M.

needs.[21] The MTEP is annually presented to the MISO Board for review and approval.[22] MISO has produced 21 MTEP reports, with the MISO Board most recently approving MTEP24.[23]

The Tariff defines various project categories that MISO may identify in the MTEP, for different purposes and with different cost allocation rules.[24] The majority of project categories are based on cost causation. The categories of transmission projects described in the Tariff are as follows:

- **Baseline Reliability Project.** Baseline Reliability Projects are Network Upgrades[25] that MISO identifies as required to ensure that the Transmission System[26] complies with applicable reliability standards.[27] Consistent with cost causation principles, the Transmission Owner developing the project is responsible for the costs of the portion of the Baseline Reliability Project that is physically located in the Transmission Owner's pricing zone.[28]
- **New Transmission Access Project.** New Transmission Access Projects are Network Upgrades to support requests for transmission delivery service or interconnection service under the Tariff.[29] These projects include Joint Targeted

[21] *See Midcontinent Indep. Sys. Operator, Inc.,* Testimony of Jeremiah Doner, Docket No. ER22-995-000 at 6 (Filed Feb. 4, 2022).
[22] *See* MISO Tariff, Attachment FF, § I.
[23] Karen King, *MTEP24 Approval: The Largest Transmission Investment in U.S. History*, MISO Matters Blog (Dec. 13, 2024), https://www.misoenergy.org/meet-miso/media-center/miso-matters/mtep24-approval-the-largest-transmission-investment-in-u.s.-history.
[24] *See* MISO Tariff, Attachment FF, Section II.
[25] "Network Upgrade" means "all or a portion of the modifications or additions to transmission related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all Users of such Transmission System." MISO Tariff, Module A, § 1.N.
[26] MISO defines Transmission System as "[t]he transmission facilities owned or controlled by Transmission Owners that have conveyed functional control to the Transmission Provider, and are used to provide Transmission Service under Module B of this Tariff." *Id*. § 1.T.
[27] MISO Tariff, Attachment FF, § II.A.1.
[28] *Id.* § III.A.2.c.
[29] *Id.* § II.A.2.

Interconnection Queue (JTIQ) upgrades, projects associated with the interconnection of new generation, and projects needed to accommodate requests for transmission service.[30] There are a variety of cost allocations potentially applicable to New Transmission Access Projects, but these projects are, with limited exception, not regionally cost allocated.[31] They are based on cost causation principles.

- **Market Efficiency Project.**[32] A Market Efficiency Project (MEP) provides regional benefits under the criteria set forth in Section II.B.1 of Attachment FF.[33] Those benefits must be at least 25% greater than project costs (a benefit to cost ratio of 1.25 or greater).[34] An MEP must have a Project Cost[35] of $5 million or more and operate at voltages of 230 kilovolts (kV) or higher.[36] MEPs costs are paid by Transmission Customers that benefits from the project.[37] The process for determining the specific metrics (measurements) used to determine those benefits are listed in the Tariff and accepted by FERC.
- **Market Participant Funded Project.**[38] These projects are Network Upgrades fully funded by one or more market participants (including utilities) but owned

[30] *Id.* § II.A.2.a-b.
[31] *See generally*, *id.* § III.A.2.d-e.
[32] The MISO Tariff also creates subsets of MEPs, such as Targeted MEPs and Interregional MEPs, with different criteria. *See id.* § II.B, F.
[33] *Id.* § II.B.
[34] *Id.* § II.B.1.c.
[35] "Project Cost" means "[a]ll costs for Network Upgrades, as determined by the Transmission Provider to be a single transmission expansion project, including those costs associated with seeking and obtaining all necessary approvals for the design, engineering, construction, and testing of the Network Upgrades." *See* MISO Tariff, Module A, § 1.P.
[36] MISO Tariff, Attachment FF, § II.B. Projects that qualify as Interregional Market Efficiency Projects under Section IX of the MISO-PJM JOA have different cost allocation rules under Attachment FF.
[37] *Id.* § III.A.2.f.i.
[38] *Id.* § II.D.

and operated by an incumbent Transmission Owner.[39] Stakeholders volunteer to pay for these projects because they have determined first-hand the value these projects will provide them. There is no need to rely on theoretical benefits to mandate a cost allocation.

- **Multi-Value Projects.** MVPs are regional projects identified in the MTEP process and approved by the MISO Board, as described below. If a transmission project qualifies, MISO is required to classify the project as an MVP regardless of whether the project also qualifies as a Baseline Reliability Project and/or Market Efficiency Project.[40] The cost of these Tranche 2.1 projects is spread regionwide (MISO Midwest) under the Tariff based on false benefits.

B. Multi-Value Projects

1. Criteria to Qualify as a Multi-Value Project

A portfolio of MVPs must **broadly benefit** either the entire MISO footprint or one of its subregions (*i.e.,* MISO Midwest or MISO South).[41] To evidence its benefits, an MVP portfolio must meet at least one of the following criteria:[42]

- **Criterion 1:** An MVP must be developed through the transmission expansion planning process to enable the Transmission System to reliably and economically deliver energy in support of documented energy policy mandates or laws that have been enacted or adopted through state or federal legislation or regulatory requirements that directly or indirectly govern the minimum or maximum amount of energy that can be generated by specific types of

[39] *Id.*
[40] *Id.* § II.C.4.
[41] *See id.* § II.C.1.
[42] *Id.* § II.C.2.

generation. The MVP must be shown to enable the transmission system to deliver such energy in a manner that is more reliable and/or more economic than it otherwise would be without the transmission upgrade.

- **Criterion 2:** An MVP must provide multiple types of economic value across multiple pricing zones with a Total MVP Benefit-to-Cost ratio of 1.0 or higher where the Total MVP Benefit-to-Cost ratio is described in Section II.C.7 of this Attachment FF. The reduction of production costs and the associated reduction of Locational Marginal Prices resulting from a transmission congestion relief project are not additive and are considered a single type of economic value.
- **Criterion 3:** An MVP must address at least one Transmission Issue associated with a projected violation of a North American Electric Reliability Corporation (NERC) or Regional Entity standard and at least one economic-based Transmission Issue that provides economic value across multiple pricing zones. The project must generate total financially quantifiable benefits, including quantifiable reliability benefits, in excess of the total project costs based on the definition of financial benefits and Project Costs provided in Section II.C.7 of Attachment FF.

MISO may consider the following categories of economic benefits when evaluating whether the benefits of a proposed MVP outweigh its costs:[43]

[43] *See id.* § II.C.5.

- Production cost savings where production costs include generator startup, hourly generator no-load, generator energy, and generator Operating Reserve[44] costs.
- Capacity losses savings where capacity losses represent the amount of capacity required to serve transmission losses during the system peak hour including associated planning reserve.
- Capacity savings due to reductions in the overall Planning Reserve Margins[45] resulting from transmission expansion.
- Long-term cost savings realized by Transmission Customers by accelerating a long-term project start date in lieu of implementing a short-term project in the interim and/or long-term cost savings realized by Transmission Customers by deferring or eliminating the need to perform one or more projects in the future.
- Any other financially quantifiable benefit to Transmission Customers resulting from an enhancement to the Transmission System and related to the provisions of Transmission Service. This last metric is an overly broad category that MISO relied upon to meet the required benefit/cost ratio.

A project must satisfy a variety of additional conditions to be an MVP, including that the total project capital cost be $20 million or more and that the MVP has a voltage of 100 kV or higher.[46]

[44] "Operating Reserve" means the "capability above firm system demand maintained to provide for Regulation, Load forecasting error, equipment forced and scheduled outages, and local area protection." MISO Tariff, Module A, § 1.O.
[45] "Planning Reserve Margin" means the "percentage above forecasted Coincident Peak Demand of Planning Resources for the Transmission Provider Region in order to meet the [Loss of Load Expectation]." *Id.* § 1.P.
[46] MISO Tariff, Attachment FF § II.C.3.

As described in this Complaint, MISO and the Board incorrectly determined that the Tranche 2.1 projects qualified as MVPs under Criterion 2 described above by unreasonably estimating these projects' benefits to artificially put them above the required 1.0 benefit-cost threshold.

2. History of the Multi-Value Project Category

FERC approved the MVP category and cost allocation in 2010, which was later affirmed by the U.S. Court of Appeals for the Seventh Circuit.[47] The MVP cost allocation was affirmed in part because of the idea that MVPs "will benefit all members of MISO and so the projects' costs should be shared among all members."[48] At the time, the Midwest subregion was MISO's entire footprint because the Entergy Operating Companies (Entergy) had not yet joined MISO.[49] The then-approved MVP cost allocation method "assign[ed] 100% of the costs of MVP portfolios to all load in and exports from MISO on a postage stamp basis across the entire MISO footprint, and costs are recovered through a per-MWh [megawatt hour] MVP usage charge."[50] The term "postage stamp" means that "transmission costs are recovered uniformly from all loads in a defined market area."[51] FERC found postage stamp cost allocation for MVPs "will result in the allocation of the costs of transmission projects on a basis that is 'roughly commensurate' with the benefits

[47] *Midwest Indep. Transmission Sys. Operator, Inc.*, 133 FERC ¶ 61,221 (2010) (MVP Order), *order on reh'g*, 137 FERC ¶ 61,074 (2011) (MVP Rehearing Order) (together, MVP Orders), *aff'd sub nom. Ill. Commerce Comm'n v. FERC,* 721 F.3d 764 (7th Cir. 2013).
[48] *Ill. Commerce Comm'n v. FERC,* 721 F.3d 764, 773 (7th Cir. 2013).
[49] *See* Midcontinent Independent System Operator, Inc., *MISO Transmission Expansion Plan 2011* at 8 (picturing the entire MISO footprint in 2011, which included only current-day MISO Midwest) (MTEP11 Report)
[50] *Midcontinent Indep. Sys. Operator, Inc.*, 179 FERC ¶ 61,124 at P4 (2022).
[51] Johannes Pfeifenberger, Principal, The Brattle Grp., Presentation at OMS Cost Allocation Principles Committee Meeting: *Transmission Cost Allocation: Principles, Methodologies, and Recommendations*, (Nov. 16, 2020), at 5 https://www.brattle.com/insights-events/publications/transmission-cost-allocation-principles-methodologies-and-recommendations/ (emphasis removed).

of those projects," because the MVP criteria will "ensure that each project can benefit the [MISO] region."[52]

After Commission approval, MISO finalized its first MVP Portfolio for inclusion in MTEP11.[53] The portfolio included 17 projects, costing approximately $5 billion (in 2011 dollars), across the MISO Midwest subregion.[54]

Entergy's membership in 2013 created the MISO South subregion -- a new region including four states and over 30,000 MW of load.[55] MISO subsequently recognized there is limited transfer capability between the MISO Midwest and South subregions, which prevents regional transmission portfolios in one subregion from benefiting the other.[56] The limited transfer capability prevents cost allocation across that interface from being roughly commensurate with benefits received. MISO proposed, and FERC accepted, a subregional cost allocation option for MVP portfolios, limiting cost allocation to the subregion (MISO Midwest or MISO South) where the projects are located.[57]

C. MISO's Long-Range Transmission Planning Initiative and Process

MISO's Long-Range Transmission Planning (LRTP) Initiative is part of its MTEP process. The LRTP initiative began in August 2020 and "covers the planning tasks designed to identify what transmission the MISO region will need going forward as the

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[52] MVP Order at PP 200-01.
[53] *See Midcontinent Indep. Sys. Operator, Inc.,* Transmittal Letter, Docket No. ER22-995-000 at 8 (Filed Feb. 4, 2022).
[54] *See* Midcontinent Independent System Operator, Inc., *MISO Transmission Expansion Plan 2011* at 1.
[55] *See* Midcontinent Independent System Operator, Inc., *MISO's Operations Update, Entergy Regional State Committee & NARUC,* (Feb. 24, 2025), https://cdn.misoenergy.org/20250224%20ERSC%20Item%2009%20South%20Operations680597.pdf at 3 (explaining that MISO South's winter peak load was over 33 GW in 2025).
[56] *Midcontinent Indep. Sys. Operator, Inc.,* Testimony of Johannes Pfeifenberger, Docket No. ER22-995-000 at 9-10 (Filed Feb. 4, 2022). ("To the extent that the benefits of new MVP Portfolios located entirely within the Midwest Subregion accrue broadly to the zones within the Midwest Subregion and with very few benefits accruing to the South Subregion (and vice versa), cost allocation based on a MISO-wide postage stamp rate would not be roughly commensurate with benefits received.").
[57] *Midcontinent Indep. Sys. Operator, Inc.*, 179 FERC ¶ 61,124 (2022).

electric industry continues to evolve."[58] MISO specifically began the LRTP initiative to respond to ambitious renewable and decarbonization goals set by cities, states, corporations, and utilities within MISO Midwest.[59] MISO's LRTP process includes seven steps that culminates in a recommendation to the MISO Board for approval of proposed projects, including MVPs:

- **Step 1:** MISO develops long-term planning scenarios called Futures, similar to the Long-Term Scenarios described in FERC Order No. 1920.[60] The Futures incorporate various assumptions developed by MISO about the future electric power system that MISO predicts over a twenty-year transmission planning horizon to identify future transmission needs and identify transmission facilities to meet such transmission needs. A principal assumption MISO relies upon is where and what type of generation MISO believes will be built over the next twenty years. MISO uses the Futures to identify transmission facilities intended to minimize total costs in achieving MISO member goals, such as "peak demand plus reserve margin, annual energy, decarbonization goals and renewable portfolio standards/clean energy goals."[61] MISO predicts the type and location of generation resources that will exist in twenty years within its footprint based on assumptions such as future generation additions/retirements,

[58] *Midcontinent Indep. Sys. Operator, Inc.,* Transmittal Letter, Docket No. ER22-995-000 at 16 (Filed Feb. 4, 2022).
[59] MTEP24 Report at 22. MISO's main purpose for the MVP category has, since the beginning, been to move energy from remote renewable generation (primarily wind) to load centers. *Ill. Commerce Comm'n v. FERC,* 721 F.3d 764, 771 (7th Cir. 2013) ("The tariff is mainly intended to finance the construction of transmission lines for electricity generated by remote wind farms.").
[60] *Bldg. for the Future Through Elec. Reg'l Transmission Plan. & Cost Allocation*, Order No. 1920, 187 FERC ¶ 61,068 at P 40, *order on reh'g*, Order No. 1920-A, 189 FERC ¶ 61,126 (2024), *order on reh'g*, Order No. 1920-B, 191 FERC ¶ 61,026 (2025).
[61] *See* MTEP24 Report at 27.

state and utility decarbonization goals, and load growth.[62] Some of this information MISO receives directly from transmission owners, IRPs, and similar processes. The rest is based on MISO's assumptions, utility and industry group aspirational goals, and generalized predictions from organizations like the U.S. Energy Information Administration (EIA).

- **Step 2:** MISO develops models testing the economic and reliability adequacy of transmission in the Futures scenarios.[63]
- **Step 3:** MISO preforms an economic and reliability analysis to identify transmission issues in the Futures scenarios.[64]
- **Step 4:** MISO proposes transmission solutions to the economic and reliability issues identified in the Futures.[65] At this stage, MISO identifies various transmission projects to address the identified economic and reliability issues and performs alternatives analyses to verify the efficacy of the proposed projects. MISO has unilateral authority in all of these steps, including deciding which proposed transmission projects to include and exclude from these models. For example, MISO does not incorporate advanced-stage merchant transmission projects, such as Invenergy's Grain Belt Express (GBX) transmission line, in its MTEP analysis unless the project has an executed

[62] *See, e.g.*, *id.* at 28-29 (explaining the key assumptions for Future 2A).
[63] *See id.* at 32-39.
[64] *See id.* at 39-53.
[65] *See id.* at 53-81.

interconnection agreement.[66] MISO's exclusion of the GBX project from its MTEP analysis is the subject of a complaint still pending before FERC.[67]

- **Step 5:** MISO evaluates the effectiveness of its proposed solutions to the economic and reliability issues identified in the Futures.[68] MISO explains the benefits of its solutions to each Local Resource Zone (LRZ) in the MISO footprint, discussing each transmission project within its proposed solution.[69] MISO also analyzes the business case of the proposed projects to demonstrate that the financially quantifiable benefits exceed the costs.[70]
- **Step 6:** MISO recommends preferred solutions to the issues identified in the Futures.[71] At this stage, MISO proposes a tranche of transmission projects that it prefers to resolve the economic and reliability issues that arose in its predicted Futures.[72]
- **Step 7:** MISO applies a cost allocation to the tranche of transmission projects, as determined under Attachment FF of the Tariff.[73] Note that by using postage

[66] *See Invenergy Transmission LLC v. Midcontinent Indep. Sys. Operator, Inc.,* Answer of the Midcontinent Independent System Operator, Inc., Docket No. EL22-83-000 at 5 (Sep. 7, 2022) ("Under the MISO Tariff, long-term planning models (i.e., 5 years or longer) model generation by including generation facilities that are: '(i) existing and expected to be in existence in the planning horizon; (ii) not existing but with executed interconnection agreements; and (iii) additional generation as determined with stakeholder input.' Consistent with these requirements, Invenergy must have an executed interconnection agreement for the GBX Line or, alternatively, qualify its planned generator injections as 'additional generation as determined with stakeholder input,' which requires inclusion of such additional generation in an Integrated Resource Plan ('IRP') or a preferred plan (where no IRP is used) by a MISO Load Serving Entity ('LSE') or a MISO State.").
[67] *See Invenergy Transmission LLC v. Midcontinent Indep. Sys. Operator, Inc.,* Complaint Requesting Fast Track Processing to Fix MISO's Transmission Expansion Planning Process, Docket No. EL22-83-000 (Aug. 8, 2022).
[68] *See* MTEP24 Report at 81-161.
[69] *See id.*
[70] *See id.* at 125.
[71] *See, e.g., id.* at 161.
[72] *See, e.g., id.*
[73] *See id.* at 163-67.

stamp pricing, MISO need not demonstrate that customers in each Transmission Pricing Zone receive benefits sufficient to at least offset their costs. And unlike MEPs, customers who end up with negative benefits (*i.e.,* an increase in costs because of the projects) are not exempted from the obligation to pay the MVP charge.

Once MISO has determined its preferred tranche of transmission projects and the categories the projects fit within, it submits the projects for review and approval by the MISO Board. Neither the states nor FERC have an opportunity to review.

D. MISO Futures

Beginning in mid-2019 through the end of 2020, MISO developed three Future scenarios (the Series 1 Futures).[74] According to MISO, the Series 1 Futures "forecast[] the fleet mix that meets MISO's planning reserve margin at the lowest cost while adhering to [member and state] policy objectives."[75] The term "fleet mix" refers to the type and location of generation that exists and that MISO predicts will be built and retire over the next twenty years. The Series 1 Futures were meant to bookend the potential outcomes of the region's generation mix in 2039.[76] MISO used the Series 1 Futures as the foundation for LRTP Tranche 1,[77] described below.

Beginning in the summer of 2022 and ending in the fall of 2023, MISO updated the Series 1 Futures with new assumptions based on changes to members' and states' resource

[74]Midcontinent Independent System Operator, Inc., *MISO Futures Report: Series 1A*, (Nov. 1, 2023), https://cdn.misoenergy.org/Series1A_Futures_Report630735.pdf at 9 (MISO Futures Refresh).
[75] Midcontinent Independent System Operator, Inc., *MISO Futures Report* (Apr. 2021, Updated Dec. 2021), https://cdn.misoenergy.org/MISO%20Futures%20Report538224.pdf at 2 (MISO Futures Report).
[76] *See* MISO Futures Report at 3.
[77] MISO Futures Refresh at 2 (explaining that the Series 1 Futures were the "foundation of the LRTP Tranche 1 analysis").

plans, new legislation, updated pricing, and other factors.[78] According to MISO, these refreshed Futures (Series 1A) forecasted the bookend scenarios for the fleet mix in 2042.

Series 1A is comprised of three Futures, including Future 2A that is the foundation for LRTP Tranche 2.1.[79] Series 1A predicts an accelerating fleet transition from conventional to renewable resources over the next twenty years, as compared to Series 1.[80] MISO stated that a variety of state, federal, and utility clean energy policies were the driver behind updating its Futures, and as a result, Series 1A contains significantly higher levels of renewable energy development than Series 1.[81] A summary of the Series 1/1A Futures assumptions are shown in Figure 1 below.

[78] *Id.* at 2.
[79] *Id*. ("Future 2A, within the Series 1A Futures cohort, is the focus of the LRTP Tranche 2 analysis.").
[80] *Id.* at 9.
[81] *Id.* at 2 ("Results from the Series 1A refresh continue to reflect a significant fleet transition over the next 20 years. However, compared to the Series 1 Futures, the pace of the transition is accelerating.").

Source: MTEP24 Report, Chapter 2

In these Futures, MISO made numerous assumptions about the state of the bulk power system in twenty years, including which resources would retire, the types of generation resources that would be added, and the extent and character of electric load growth.[82]

MISO decided where generation would be sited based on the assumptions in each Future for its modeling.[83] MISO's resource expansion contained resources actually planned by MISO members (Member Planned Resources) and included in MISO's generation interconnection queue.[84] But, it also contained resources artificially inserted by MISO's

[82] *See id.* at 4.
[83] *See, e.g., id.* at 74 (showing the breakdown of resources in Future 2A by existing resources, planned resources, and resources built by MISO's modeling).
[84] *See, e.g., id.* at 54.

modeling software; that is, resources that no utility, state, or developer has committed to build.[85]

Based on these Futures and assumed generation type and locations over the next twenty years, MISO developed a conceptual transmission roadmap it believes will efficiently and reliably meet future system needs.[86] This roadmap lays out MISO's plan to approve approximately $100 billion of transmission projects spread out over four "tranches" (*i.e.,* portfolios of Projects), beginning with a focus on the Midwest subregion for Tranches 1, 2.1 and 2.2, moving later to MISO South in Tranche 3 and the Midwest-South connection in Tranche 4.[87]

E. LRTP Tranche 1

MISO used Future 1 in the Series 1 cohort to justify LRTP Tranche 1 – a $10.3 billion portfolio of 18 new high-voltage transmission investments across the MISO Midwest subregion.[88]

MISO produced a Tranche 1 business case analysis that projected a benefit-cost ratio of the Tranche 1 projects between 2.6 and 3.8. These projects exceeded a 1.0 region-wide benefit-cost ratio and therefore qualified as MVPs under Section II.C.2.b of Attachment FF.[89] MISO presented six categories of benefits to stakeholders that it would use to quantify the benefits produced by Tranche 1. Those categories are listed below:[90]

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[85] *See, e.g., id.* at 58, 74, 91.
[86] *See* MTEP24 Report at 22.
[87] *See id.*
[88] *See id.* at 23.
[89] Midcontinent Independent System Operator, Inc., *MTEP21 Report Addendum: Long Range Transmission Planning Tranche 1: Executive Summary*, https://cdn.misoenergy.org/MTEP21%20Addendum-LRTP%20Tranche%201%20Report%20with%20Executive%20Summary625790.pdf at 4 ("Tranche 1 portfolio has a benefit-to-cost ratio of between 2.6 and 3.8.") (MTEP21 Report Executive Summary).
[90] *Id.* at 3.

- **Congestion and Fuel Savings.** MISO claimed Tranche 1 will allow more low-cost resources to be integrated, replacing higher-cost resources and lowering the overall cost to serve load. Congestion and fuel savings was the largest benefit calculated for Tranche 1 and nearly matched the entire cost of the portfolio.
- **Avoided Capital Cost of Local Resources.** MISO claimed Tranche 1 will allow resource build-out to be optimized in areas where they can be more productive, reducing the need for local buildout. In other words, by deciding where to build transmission, MISO, instead of states and their utilities, would decide where future generation would be located for resource adequacy. Together, Congestion and Fuel Savings and Avoided Capital Cost of Local Resources provided the vast majority of benefits needed to exceed the 1.0 Benefit to Cost requirement to qualify the projects as MVPs. The sum of all remaining benefits (those listed below) was somewhere in the range of 17% to 46% of the total.
- **Avoided Transmission Investment.** MISO claimed Tranche 1 will reduce transmission line loading and avoid future reliability upgrades, avoiding the cost for replacing facilities due to age and condition.
- **Resource Adequacy Savings.** MISO claimed Tranche 1 will increase transfer capability, which will allow access to resources in otherwise constrained areas and defer the need for investment in local resources. Again, resource adequacy – the choice of generation fuel type and location – is solely within the

jurisdiction of states, irrespective of whether MISO believes there would be preferable fuel types or locations.

- **Avoided Risk of Load Shedding.** MISO claimed Tranche 1 will enhance the resilience of the grid and reduce the risk of load loss caused by severe weather events.
- **Decarbonization.** MISO claimed that the higher penetration of renewable resources enabled by Tranche 1 will result in less carbon dioxide emissions. While MISO acknowledged there is no regulatory or statutory cost of carbon applicable to its entire footprint, MISO used a range of carbon prices in 2022 dollars, used throughout the country, to quantify this benefit, at a low-end of $12.55 per metric ton of carbon emissions and a high-end of $47.80.

Importantly, none of the specific methodologies to calculate these benefits are included in the MISO Tariff or have been accepted by FERC.

An overview of the benefits calculated is shown in Figure 2 below:

Source: MTEP21 Report Executive Summary

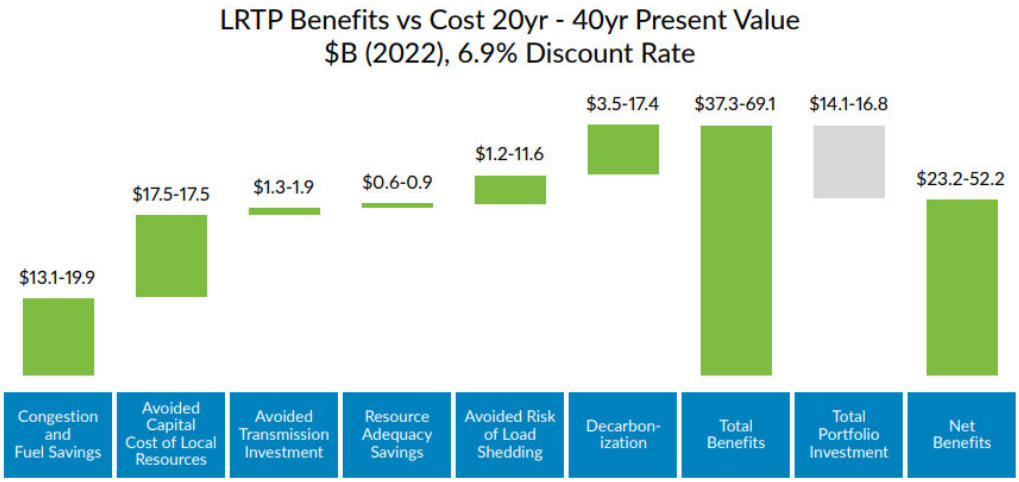


Figure 2: LRTP Tranche 1 Portfolio benefits far outweigh costs (Values as of 6/1/22)*

*Note: This implies benefit-to-cost (B/C) ratio ranges of 20-yr PV B/C = 2.6 and 40-yr PV B/C = 4.0

Tranche 1 was agreed to by all MISO Midwest states and, ultimately, approved by the MISO Board on July 25, 2022.[91] Tranche 1 projects qualified as MVPs and are cost-allocated to the MISO Midwest subregion via a postage-stamp rate.[92]

F. LRTP Tranche 2.1

MISO originally planned to proffer a single Tranche 2. After significant modeling and several iterations, MISO recognized that the entire Tranche 2 portfolio could not be successfully modeled and approved by the MISO Board before December 2024. As MISO's internal corporate goals required Board approval for Tranche 2 projects, MISO

[91] Press Release, Midcontinent Independent System Operator, Inc., *MISO Board Approves $10.3B in Transmission Projects* (July 25, 2022), https://www.misoenergy.org/meet-miso/media-center/2022/miso-board-approves-$10.3-in-transmission-projects.

[92] *See* MTEP24 Report at 23 ("Tranche 1 solutions addressed approximately 30% of issues that were identified. Analysis was based on Future 1 and a Multi-Value Project (MVP) cost allocation approach will spread the costs of projects pro-rata to load across the MISO West, Central and East regions (Midwest subregion).").

notified stakeholders that it would divide Tranche 2 into two parts: Tranches 2.1 and 2.2. That way, MISO could achieve its corporate goal of having some Tranche 2 projects approved in 2024.

This Complaint focuses on MISO's assumptions and analysis to create Tranche 2.1.

1. Future 2A

LRTP Tranche 2.1 is an approximately $22 billion portfolio of 24 new high-voltage transmission investments across the MISO Midwest subregion, created to address issues identified in Future 2A. MISO created Future 2A based on the assumption that states and utilities would meet 100% of non-federally mandated and voluntary clean energy and decarbonization goals within their timelines, with a minimum subregional decarbonization of 60% against 2005 levels.[93] MISO also assumed 30% load growth against 2022 levels based primarily on electrification,[94] and MISO accelerated the retirements of aging generation (primarily conventionally fueled resources) as compared to Future 1A.[95]

MISO modeled the addition of over 369 gigawatts (GW) of wind, solar, and energy storage capacity in Future 2A, which MISO believes would offset the retirement of approximately 102 GW of primarily conventionally fueled dispatchable resources.[96] MISO sited these resources to facilitate completion of its modeling; none of the resource locations are final. Of the resources sited in Future 2A, 54% were Member Planned (*e.g.,* included in member IRPs); the remaining 46%, almost half, were assumed by MISO's capacity expansion modeling software.[97] To clarify, Member Planned resources are included in

[93] MISO Futures Report at 5.
[94] *See* MISO Futures Refresh at 38.
[95] *Id.* at 21.
[96] *Id.* at 55.
[97] *See id.* at 54.

actual MISO member plans. Because they are not yet built, these resources do not represent a sunk cost.

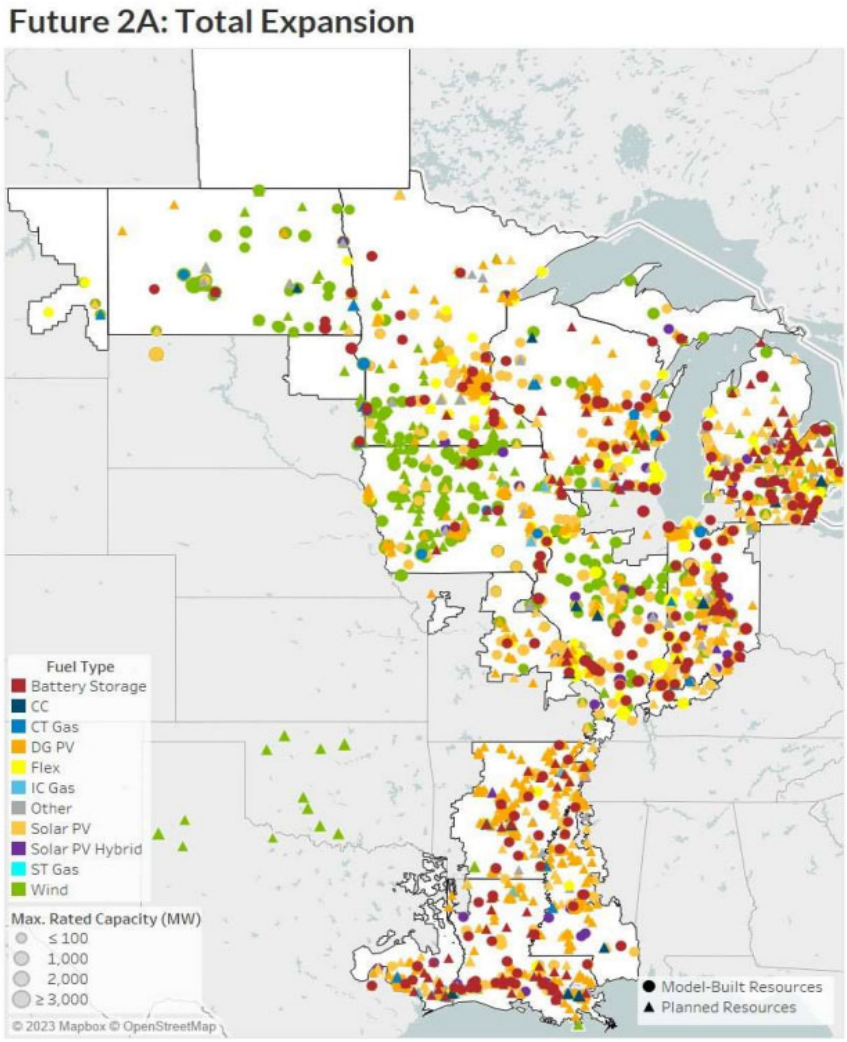
To solve the inability of the assumed future renewable additions from MISO's planning model to meet load (*i.e.*, to ensure the system can operate reliably with all of the renewable generation MISO anticipates will be added), MISO inserted approximately 29.8 GW of resources into its modeling based on a non-existent technology (Flex Unit).[98] Flex Units are "proxy resources that refer to a non-exhaustive range of existing and nascent technologies, representing potential generation that is highly available, highly accredited, low- or non-carbon emitting, and long in duration."[99] Importantly, the addition of the almost the Flex Units at the end of the process would likely displace a large share of the resources perceived to be needed by MISO's capacity expansion model, but MISO declined to re-run the capacity expansion model to reduce the model-built resources.

MISO "sited" these Flex Units (i) with a technology it could not identify and that does not exist, and (ii) that no utility or state commission has agreed to site, in strategic areas to force its model to find that each LRZ would have enough accredited capacity to meet its Local Clearing Requirement (LCR).[100]

[98] *See id.* at 108 (showing 29.8 GW of flex units in Future 2A).
[99] *Id.* at 20.
[100] *Id.* (explaining that MISO added 29 GW of Flex units to meet energy shortfalls identified in its modeling); *Id.* at 50 (explaining that resources "were sited to ensure each Local Resource Zone (LRZ) met its Local Clearing Requirement (LCR) on an estimated accredited capacity basis in each milestone year.").

The resources, including Flex Units, sited in Future 2A are shown in Figure 3 below.

Source: MISO Series 1A Futures Report



2. Development of Tranche 2.1

MISO began developing Tranche 2.1 in 2022 in reliance on Series 2A Futures.[101] In January 2023, and before engaging stakeholders, MISO created a conceptual map for

[101] Midcontinent Independent System Operator, Inc., *MTEP24 Report: Executive Summary*, https://cdn.misoenergy.org/MTEP24%20Executive%20Summary658126.pdf at 12 (MTEP24 Report Executive Summary).

LRTP Tranche 2.1 with proposed projects already identified.[102] Between March 2023 and July 2024, MISO applied the metrics that it used to justify Tranche 1 to its Tranche 2.1 projects.

After initial model runs, applying the Tranche 1 metrics to Tranche 2.1 did not yield a benefit to cost ratio of at least 1.0, which would lead to a failed business case for this group of projects. Consequentially, MISO unveiled its "new" benefit metrics in a business case whitepaper and proposed changes to the existing metrics. These new metrics were first unveiled to stakeholders at MISO's March 10, 2023, LRTP Workshop.[103] Unsurprisingly, the new metrics provided enough calculated benefits to satisfy the business case.[104]

It is MISO's creation and use of these new benefit metrics and changes to existing metrics that this Complaint challenges; metrics that do not reflect actual benefits and, therefore, do not justify classifying the Tranche 2.1 projects as MVPs. While there were nine total metrics, the primary categories of benefits used by MISO to justify Tranche 2.1 are below:[105]

- **Mitigation of Reliability Issues.** MISO claimed Tranche 2.1 will provide reliability value by mitigating thermal overloading of transmission facilities that would otherwise present a risk of unserved load.

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[102] *See id.* at 6-9.
[103] *See* Midcontinent Independent System Operator, Inc., *LRTP Workshop – LRTP Tranche 2 Business Case Benefit Metrics Presentation*, at 3-14 (Mar. 10, 2023) https://cdn.misoenergy.org/20230310%20LRTP%20Workshop%20Item%2005%20Business%20Case%20Metrics%20Development%20Presentation628153.pdf (Exhibit 2).
[104] *See* Midcontinent Independent System Operator, Inc., *LRTP Tranche 2 Business Case Metrics Methodology Whitepaper* (Oct. 1, 2024), https://cdn.misoenergy.org/LRTP%20Tranche%202%20Business%20Case%20Metrics%20Methodology%20Whitepaper633738.pdf (MISO Tranche 2.1 Whitepaper).
[105] MTEP24 Report Executive Summary at 14.

- **Avoided Capacity Costs.** MISO claimed Tranche 2.1 will reduce the need for more resource investment by increasing transfer capability and enabling access to resources across the broader MISO Midwest subregion.
- **Decarbonization.** MISO claimed Tranche 2.1 will reduce carbon emissions by alleviating congestion and enabling more efficient dispatch of lower carbon resources.

MISO claims Tranche 2.1 will have a benefit-cost ratio of between 1.8 to 3.5 based on Future 2A over a twenty-year horizon.[106] Nearly all the alleged benefits of Tranche 2.1 come from Mitigation of Reliability Issues, Avoided Capacity Costs, and Decarbonization.[107] As explained by Dr. Hogan, without these two new metrics and the revised Decarbonization metric, the total benefits from Tranche 2.1 would reduce the low-end twenty-year benefit case from $51.7 billion to less than $15.7 billion, resulting in benefits that are significantly less than costs.[108]

The MISO Board approved Tranche 2.1 on December 12, 2024.[109]

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[106] Midcontinent Independent System Operator, Inc., *LRTP Tranche 2.1: Benefits Analysis Results Review* (Sept. 25, 2024), https://cdn.misoenergy.org/20240925%20LRTP%20Workshop%20Item%2001%20Tranche%202.1%20Business%20Case%20Overview649810.pdf at 4 (MISO Benefits Analysis Slideshow).

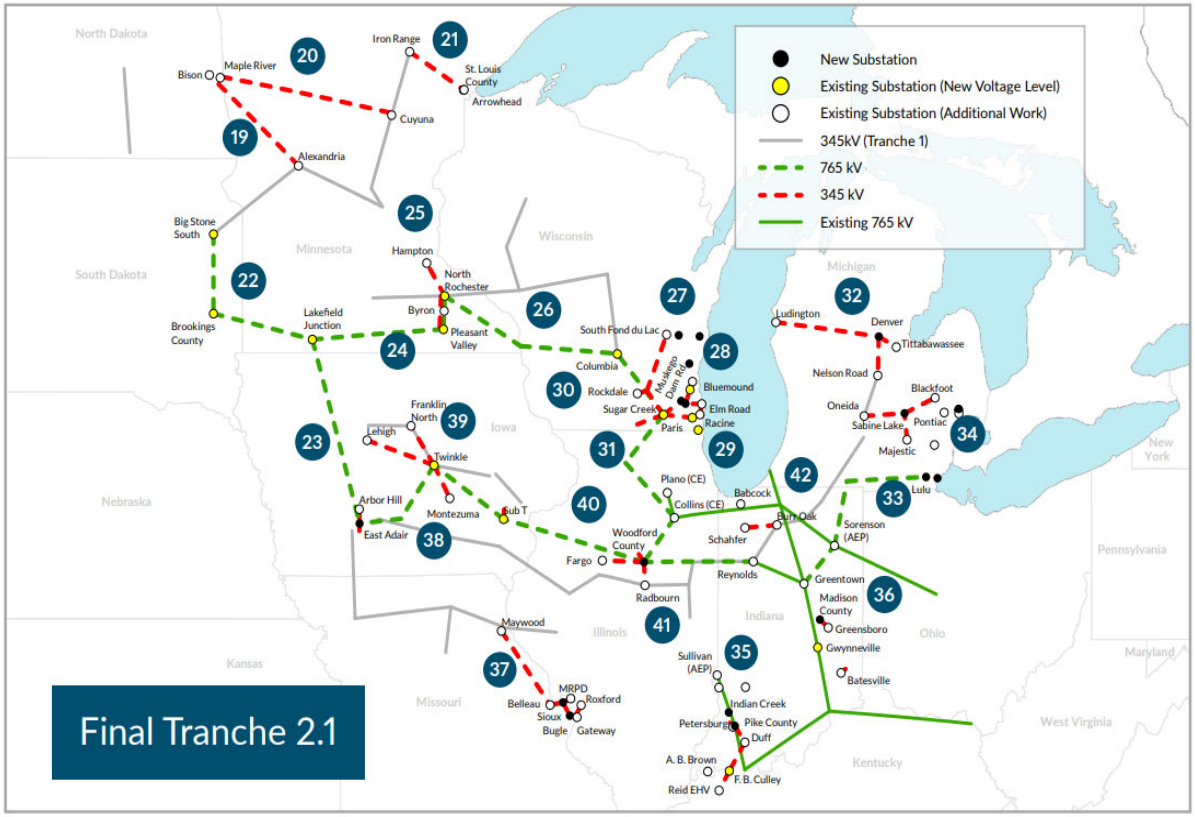
[107] *Id.*

[108] *See* Hogan Test. at 40-41, Figure 2 (showing an adjusted benefit-to-cost ratio of between 0.55 and 0.68).

[109] *MISO Board Approves Historic Transmission Plan to Strengthen Grid Reliability* (Dec. 12, 2024) https://www.misoenergy.org/meet-miso/media-center/2024/miso-board-approves-historic-transmission-plan-to-strengthen-grid-reliability/.

The final LRTP Tranche 2.1 Portfolio is shown below as Figure 4.

Source: MTEP24 Report Executive Summary



3. Stakeholder Concerns with Tranche 2.1

Many stakeholders expressed significant concerns about the benefit-cost analysis MISO used to justify Tranche 2.1. Potomac Economics, MISO's external IMM, identified issues with the Tranche 2.1 business case in multiple rounds of comments to MISO, including a letter to MISO on July 15, 2024,[110] and a presentation to the MISO System

[110] *See* Memorandum from David Patton, Potomac Economics, to the Midcontinent Independent System Operator, "Concerns and Recommendations for the Tranche 2 Benefit Methodologies" (July 15, 2024) https://cdn.misoenergy.org/IMM%20Memo%20re%20Tranche2%20Benefits%20Methodologies646681.pdf (IMM Memo) (Exhibit 3).

Planning Committee on October 30, 2024.[111] In these comments, the IMM identified four primary flaws that led to an inflated benefits calculation:

- MISO mistakenly assumed that the Future 2A generation resources would be sited in the same place regardless of whether Tranche 2.1 is built. The IMM argued that if Tranche 2.1 is not built, the economic incentives produced by MISO's markets and the changes in MISO's local capacity requirements would cause new resources to shift closer to load.[112] According to the IMM, this shift in resources (*e.g.,* building resources closer to load) would "reduce or eliminate many of the benefits MISO plans to estimate (*e.g.,* avoided capacity costs and the benefits of reduced losses)."[113] The IMM noted that MISO should have calculated a generation expansion base-case, different than Future 2A, that reasonably reflected siting locations without Tranche 2.1, and measured the benefits of Tranche 2.1 based on the siting locations in Future 2A.
- MISO calculated the Avoided Capacity Cost benefit by assuming that all of the Future 2A generation would be built in the same locations, even though much of it would not be "deliverable" or qualify to sell as capacity without the Tranche 2.1 transmission. Instead of assuming this generation would simply move to deliverable locations, MISO identified 22.8 GW of additional and redundant generation that would be built closer to load to meet local resource adequacy requirements if the Tranche 2.1 transmission were not built (the Base

[111] *See* Midcontinent Independent System Operator, Inc., Board Meeting Minutes, (Oct. 30, 2024), https://cdn.misoenergy.org/20241210%20System%20Planning%20Committee%20of%20the%20BOD%20Item%2003%20Minutes%2020241030665352.pdf.
[112] IMM Memo at 1.
[113] *Id.* at 2.

Case Reliability Generation). But MISO neglected to reduce the amount of remotely sited generation (*i.e.,* generation that cannot be delivered without Tranche 2.1) to reflect the addition of the Base Case Reliability Generation. That mistake led to a much larger estimated benefits of Tranche 2.1 since moving the resources would be much less costly than building almost 23 GW of redundant generation.

- MISO mistakenly calculated the benefits from addressing these reliability issues by assuming that the local reliability issues mitigated by Tranche 2.1 would, absent the transmission investment, result in load shedding priced at the Value of Lost Load (VOLL).[114] The IMM explained that, in reality, these types of reliability issues do not result in load shedding. Instead, they are "managed operationally through out-of-market commitments, modeling thermal proxy transmission constraints, transmission reconfigurations, or by investments in other network equipment."[115] These methods are much less expensive than the cost of load shedding represented by VOLL. Therefore, the IMM argued the Mitigation of Reliability Issues benefit is significantly overstated, if not non-existent.[116]
- MISO's $85-$249 per metric ton carbon value is highly overstated. The IMM explained that the implied carbon value in the federal Production Tax Credit

[114] *Id.* at 5-6. Value of Lost Load – Pricing means "[t]he value that represents the price consumers are willing to pay to avoid an interruption of electrical service during a EEA-Level 3, which is based on consumers with the lowest willingness to pay." *See* MISO Tariff, Module A, § 1.V. Note that when Tranche 2.1 was approved, VOLL was $3,500/MWh. It has since been raised to $10,000/MWh. *See Midcontinent Independent System Operator, Inc.,* 191 FERC ¶ 61,019, PP 40-45 **(**Apr. 8, 2025) (accepting MISO's proposal to raise VOLL to $10,000).
[115] *Id.* at 6.
[116] *Id*.

(PTC) for carbon-free generating resources is the appropriate figure because it is federal policy that applies to the entire MISO region. The IMM calculated this implied value at approximately $50 per metric ton of carbon emissions.[117] The IMM noted that in absence of a consensus that the PTC undervalues carbon, it is inappropriate for MISO to impose its view of the social cost of carbon (SCC) to justify costly new transmission investment that must be borne by MISO's customers that do not share MISO's view.[118]

Correcting for these flaws, the IMM estimated that Tranche 2.1's benefit-cost ratio would fall well below 1.0 and the projects would not be eligible for MVP cost allocation.[119] The North Dakota Public Service Commission (ND PSC) filed comments with MISO supporting the IMM's concerns and urging MISO to "reevaluate its benefit metrics, develop an alternative reference case that accurately reflects decisions that utilities would make in the absence of Tranche 2.1, and run a sensitivity on a case as proposed by the IMM."[120] The ND PSC's request fell on deaf ears. The MISO Board approved Tranche 2.1 despite the obvious and identified flaws highlighted by the IMM, the ND PSC, and others.

IV. COMPLAINT

A. Standard of Review

Under the FPA, which has the primary purpose of protecting utility customers,[121] FERC must ensure that rates and charges set by public utilities in connection with the

[117] *Id.* at 5 ("We have estimated that the PTC corresponds to a carbon value of roughly $50 per ton of carbon.").
[118] *Id*.
[119] *See* Midcontinent Independent System Operator, Inc., Board Meeting Minutes, (Oct. 30, 2024), at 2 https://cdn.misoenergy.org/20241210%20System%20Planning%20Committee%20of%20the%20BOD%20Item%2003%20Minutes%2020241030665352.pdf. ("As opposed to the Company's Future 2-A benefit-to-cost estimate of 1.81 over a 20-year period, the IMM believes that the estimated benefit ratio is 0.69.").
[120] N.D. Pub. Serv. Comm'n, Comments on MISO Tranche 2.1 (Exhibit 4).
[121] *Electrical District No. 1 v. FERC*, 774 F.2d 490, 492-93 (D.C. Cir. 1985).

transmission of electric energy are not "unjust, unreasonable, unduly discriminatory or preferential."[122]

If a public utility has acted unjustly and unreasonably in violation of its Commission-approved Tariff, any person may file a complaint with FERC to address the violation.[123] If FERC finds reasonable grounds for the complaint, it must investigate the matters complained of in such manner and by such means as it finds proper.[124] The complainant has the burden to show the public utility violated its Tariff,[125] and if so, FERC has the power to issue an order remedying the violation.[126] It is unjust, unreasonable, unduly discriminatory and preferential for a public utility to use inaccurate modeling or study assumptions to justify cost allocation of electric transmission infrastructure.[127]

B. MISO Violated Attachment FF of its Tariff by Designating LRTP Tranche 2.1 as an MVP Portfolio based on Inaccurate Modeling and Assumptions

Dr. Hogan describes in detail significant flaws in MISO's analysis conclusively demonstrating that Tranche 2.1 projects do not qualify as an MVP portfolio. Unless these projects are reclassified under another project category listed in the MISO Tariff with a Commission-approved cost allocation, MISO has no authority to direct their construction.

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[122] *See* 16 U.S.C. § 824e(a).
[123] *See* 16 U.S.C. § 825e.
[124] *See id.*
[125] *See, e.g., Cage Ranch Solar, LLC, et. al., v. Sw. Power Pool, Inc.,* 183 FERC ¶ 61,138 at P 77 (2023) ("explaining that "Cage Ranch has not met its burden under FPA section 206 to show that SPP violated its Tariff or that the conduct of its studies was unjust and unreasonable . . .").
[126] *See* 16 U.S.C. § 825h.
[127] *See, e.g., Midwest Indep. Transmission Sys. Operator, Inc.*, 141 FERC ¶ 61,068, at P 50 (2012) (stating that "[r]elying on outdated model assumptions . . . could result in the construction of unneeded facilities"); *Midwest Indep. Transmission Sys. Operator, Inc.,* 146 FERC ¶ 61,013, at P 22 (2014) (stating that the use of incorrect system conditions and study assumptions can "lead to the identification of the *wrong* network upgrades that do not address the system's actual reliability needs"); *Midwest Indep. Transmission Sys. Operator, Inc.,* 135 FERC ¶ 61,222, at P 24 (2011) (finding that the use of inaccurate modeling assumptions has the potential to adversely affect reliability and result in inaccurate cost assignment).

1. MISO Inaccurately Modeled the Base/Reference Case for Future Generation Investment, Leading to Inflated Avoided Capacity Cost Benefit Assumptions

MISO based its Avoided Capacity Cost metric on the faulty premise that, without Tranche 2.1, there will be increased congestion that will increase the planning reserve margin (PRM) of MISO's system, mandating capacity investment in addition to the Future 2A resources to meet the PRM (*i.e.,* the Base Case Reliability Generation).[128] MISO applied a heightened PRM over the last 10 years of its study period (2032-2042) to its Electric Generation Expansion Analysis System (EGEAS) model to identify the amount, timing, and type of additional resources needed without Tranche 2.1.[129] The cost of these additional resources is the Avoided Capacity Cost benefit.[130] MISO determined Tranche 2.1 would avoid the need for the Base Case Reliability Generation and valued this benefit at $16.3 billion in 2024 dollars over twenty years.[131]

MISO's calculation of this benefit is flawed because it incorrectly assumes states and utilities will build the same Future 2A generation resources regardless of whether Tranche 2.1 is built.[132] The cost of the Future 2A generation resources that would not be deliverable without Tranche 2.1 is not a sunk cost.[133] The location and type of generation built will change if Tranche 2.1 is not constructed.[134] If Tranche 2.1 is not available to

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[128] *See* IMM Memo at 4 ("The avoided capacity cost benefit is based on an assertion that increasing levels of congestion will increase the required planning reserve margin (PRM) of the system.").
[129] MISO Benefits Analysis Slideshow at 10.
[130] *See* MISO Tranche 2.1 Whitepaper at 6.
[131] *See* MISO Benefits Analysis Slideshow at 11.
[132] *See* Hogan Test. at 15:1-3 ("In the absence of the transmission expansion, much of this this generation would likely not be built, so the generation profile is inconsistent with the definition of the Base Case.").
[133] *Id.* at 25:7-10 ("The consequence of this approach is that in calculating the benefits of the Tranche 2.1 transmission, MISO treats the cost of building the Future 2A capacity as sunk, but this generation has not been built and much is not even planned, much less approved by regulators. **These costs are not sunk.**").
[134] *Id.* at 14: 16-20 ("The most fundamental mistake in the MISO benefit analysis is that the benefit analysis starts with a set of additional resources, Future 2A generation, that is not yet built, or even planned and approved by state regulators, in most cases, and assumes that those costs are sunk when calculating the benefits of the Tranche 2.1 transmission.").

deliver energy from remote resources to load, utilities will build generation closer to load (*i.e.*, the Base Case Reliability Generation) to minimize congestion and meet required capacity LCRs.[135] MISO appears to agree, as it modeled the Base Case Reliability Generation without Tranche 2.1. In the real-world, utilities and their state regulators would recognize that with the Base Case Reliability Generation sited close to load, much of the Future 2A generation would not be needed or built, thereby avoiding those costs. MISO's base case does not even consider how much of the Future 2A generation would not be needed if the Base Case Reliability Generation were built and therefore assumes an unreasonable amount of remote generation would be built absent Tranche 2.1.

MISO's base case is further flawed because, after using the EGEAS model to create Future 2A, MISO determined the Flex Units (29.8 GW) were needed to maintain system reliability.[136] The Flex Units satisfy many of MISO's future reliability needs. Had MISO included the Flex Units in its EGEAS modeling, it likely would not have needed the Base Case Reliability Generation that MISO used to calculate its Avoided Capacity Cost benefit.[137] After correcting for these assumptions, Dr. Hogan found that a proper analysis would value the Avoided Capacity Cost benefit of Tranche 2.1 at $0.[138]

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[135] *Id.* at 27:11-14 ("A proper analysis would have revised the generation planning model, addressed the impacts of transmission constraints in the Base Case, and determined how much of the Future 2A generation would not be needed if the additional 22.8 GW of generation were built closer to load as assumed in the MISO benefit analysis.").

[136] *Id.* at 21: 14-17 – 22:1 (explaining that "the 29.8 GW of flex capacity was added to Future 2A **after** MISO had used the EGEAS model to determine the Future 2A portfolio and after MISO had estimated that 22.8 GW of generation sited closer to load would be needed to meet Planning Resource Auction (PRA) resource adequacy requirements.").

[137] *Id.* at 22: 1-4 ("Since the flex resources would naturally satisfy many, if not all, of MISO's reliability needs, the quantity of intermittent renewables that would have been predicted by EGEAS should have fallen sharply.").

[138] *Id.* at 40-41, Figure 2.

Importantly, whether and where generation is built is subject to state jurisdiction in cooperation with their regulated utilities. In the absence of an IRP or other similar state planning process, there is no evidence of which generation resources will be built. States and their utilities have a variety of options from which they may choose to serve load (*e.g.*, resources located close to load, electric storage, demand response and energy efficiency). MISO would have the states pay for transmission facilities that are not necessary nor consistent with state resource plans. In other words, to build the transmission system MISO prefers, it takes on the role of a resource planner, which is reserved to the states.

2. MISO Improperly Inflated the Mitigation of Reliability Issues by LRTP Tranche 2.1

MISO based the Mitigation of Reliability Issues metric on the faulty premise that without the Tranche 2.1 benefit of addressing or mitigating local reliability issues, there is a risk of unserved load that exceeds planning requirements.[139] MISO quantifies this benefit by multiplying the amount of load shedding it predicts would be avoided (in MWh) times an administratively-determined VOLL.[140] MISO assigns VOLL a low-end and high-end value of $3,500/MWh and $10,000/MWh, respectively.[141] As a result, MISO values this benefit between $14.8 billion and $42.3 billion in 2024 dollars over twenty years.[142]

This calculation is clearly unreasonable. First, as discussed above, MISO concluded in its Avoided Capacity Cost analysis that its system would need the Base Case Reliability Generation (22.8 GW) without Tranche 2.1.[143] However, MISO did not include the Base Case Reliability Generation in its base case reliability analysis.[144] It is unreasonable for

[139] *See* MISO Tranche 2.1 Whitepaper at 36-37.
[140] *See id.* at 43.
[141] *See id.*
[142] *See* MISO Benefits Analysis Slideshow at 18.
[143] *See* Hogan Test. at 32: 17-19.
[144] *See id.* at 32: 21-22.

MISO to exclude from its reliability benefit analysis the additional needed generation absent Tranche 2.1.[145] MISO did not show that there would be any reliability issues if, instead of Tranche 2.1, the Base Case Reliability Generation were sited or simply moved to deliverable locations as discussed above.[146]

Second, MISO accelerated the retirement timeline for gas-fired generation units in Future 2A.[147] If MISO did not artificially accelerate these timelines, existing gas-fired generation may have met the reliability needs identified by MISO in Future 2A absent Tranche 2.1.[148] Rather than VOLL, the base case cost of maintaining reliability would simply be the going-forward cost of these gas units.[149]

Third, MISO artificially restricted Flex Unit dispatch in its modeling that could have resolved reliability issues.[150] MISO limited the dispatch of Flex Units during reliability events to "enforce[] the renewable energy production levels that are established by the Futures expansion."[151] This is illogical environmentally and economically. The Flex Units are hypothetically "low- or non-carbon emitting" resources,[152] so it makes no sense

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[145] *Id.* at 35: 15-18 ("[A] valid analysis of potential reliability benefits of the Tranche 2.1 transmission would include identifying the costs of any investments needed to address the reliability issues, **after recognizing the mitigating effects of the 22.8 GW alternative generation portfolio MISO assumes would be built absent the Tranche 2.1 transmission**.") (emphasis added).

[146] *Id.* at 33: 3-10 ("If Tranche 2.1 transmission investments were not made, and the alternative generation built, the alternative generation would of course be sited to meet these reliability needs. Hence, there would be no reliability benefits to the Tranche 2.1 transmission because the reliability issues would be addressed by the generation that would be built if the Tranche 2.1 transmission was not built. This MISO assessment of reliability benefits to the Tranche 2.1 transmission, while ignoring the supply provided by the 22.8 GW of additional generation MISO itself models as being built if the Tranche 2.1 transmission was not built, is a material flaw in the MISO analysis.").

[147] *See id.* at 18: 12-15 – 19: 1-3.

[148] *Id.*

[149] *Id.*

[150] *Id.* at 33: 15-19 ("MISO apparently restricts the flex capacity from being dispatched up or down to resolve many of the modeled post contingency overloads. Hence, it appears that the reliability impacts MISO identifies are a result of MISO restricting the dispatch of the available generation, rather than any need for additional generation or transmission.").

[151] *Id.* at 34: 5-7 (quoting MISO Tranche 2.1 Whitepaper at 40).

[152] *See, e.g.,* MTEP24 Report at 31.

to restrict their dispatch for environmental reasons.[153] Even if the Flex Units emit greenhouse gas, there is no reasonable SCC value that would justify load shed in favor of dispatching the Flex Units for a short period of time during reliability events.[154]

By arbitrarily refusing to dispatch Flex Units and arbitrarily accelerating gas generation retirement dates, MISO inflates the benefits of Tranche 2.1 by creating reliability issues that otherwise would not exist.

Fourth, as the IMM explained, MISO assumes that absent building Tranche 2.1, utilities and state commissions would take no other actions over twenty years to prevent future load shed: no siting of local generation or storage that would address the reliability need; no modifications to existing generation to increase nameplate capacity; no use of behind-the-meter generation. MISO also assumes it would take no action, even though MISO is mandated through its MTEP process to identify and address these types of issues, which would result in incremental investments that cost far less than MISO's estimated costs of load shedding. Assuming that MISO along with utilities and state commissions, who have a statutory mandate to ensure reliable electric service, would be helpless to fulfill their legal obligation absent Tranche 2.1 ignores all the actions regulated utilities take to ensure reliable service.

Relying on state commissions and their regulated utilities to do nothing, in the absence of Tranche 2.1, to ensure reliable electric service into the future is an unreasonable assumption. Instead of using VOLL, MISO should have calculated its Mitigation of Reliability Issues metric by comparing the reliability benefits of Tranche 2.1 (the change

[153] Hogan Test. at 34: 8-11.
[154] *Id.* at 34: 12-17 – 35:1-2.

case) against the cost of the local upgrades and investments that would be required absent Tranche 2.1 to avoid potential load shedding (base case).[155]

Lastly, MISO's calculation ignores the likelihood that federal rules may change the economics driving certain resource decisions (*e.g.,* the elimination of tax credits). Even if Tranche 2.1 is built, if the resources MISO predicts in twenty years are not built, then none of the benefits MISO alleges will be realized. In the absence of tax credits for renewables, utilities and state commissions may rely on other non-renewable resources located closer to load.

Because of these flaws, Dr. Hogan concluded that Tranche 2.1 would likely provide no reliability benefits if this metric were properly quantified.[156]

3. MISO Improperly Inflated the Decarbonization Benefits of LRTP Tranche 2.1

MISO retained the Decarbonization metric from Tranche 1 but significantly increased the cost of carbon used to quantify this benefit to inflate its value. Instead of the $12.55-$47.80 per metric ton low-end to high-end cost of carbon used for Tranche 1, MISO used the value of the federal 45Q tax credit for carbon sequestration in its low end benefit analysis, which is $85 per metric ton.[157] In its high-end analysis, MISO used $249 per

[155] *Id.* at 35: 6-14 ("In MISO's benefits assessment there is a large amount of assumed load shedding. In actual practice, known reliability issues would not be resolved by planning to shed large amounts of load. Instead, these types of reliability issues are identified and addressed in near-term planning processes. The solutions could include incremental transmission upgrades, voltage support equipment, or generation investment such as the 22.8 GW of extra generation assumed in the MISO avoided capacity cost benefit calculation. It is the cost of these alternative strategies for addressing reliability issues that is the relevant benefit to building the Tranche 2.1 transmission, not the hypothetical and expensive load shedding assumed in the MISO benefits assessment.").
[156] *Id.* at 40-41, Figure 2.
[157] *See* MISO Tranche 2.1 Whitepaper at 32.

metric ton, which was codified by the Minnesota legislature and based on a 2023 EPA report on the SCC.[158]

As explained by Dr. Hogan, MISO should look to federal SCC values that are applicable to the entire MISO footprint.[159] Relying on a value assigned by the Minnesota legislature is unjust, unreasonable, and unduly preferential. MISO failed to provide a reasonable rationale for selecting Minnesota's higher value of carbon to justify the Tranche 2.1 business case. Other states use significantly lower values, and in the case of North Dakota, a value of zero. MISO valued this benefit between $7.2 and $28.3 billion in 2024 dollars over twenty years[160] -- an amount significantly greater than what was used in Tranche 1.

Dr. Hogan explains that MISO should have used the implied carbon value of the federal PTC as the low-end SCC value, which is approximately $50 per metric ton of carbon emissions.[161] Dr. Hogan argues the appropriate high-end value is the federal 45Q tax credit value of $85 per metric ton.[162] These values represent federal consensus on the SCC, rather than the high-end of individual states. Using these appropriate SCC numbers, Dr. Hogan found that the Decarbonization benefit of Tranche 2.1 was between $4.3 to $7.2 billion in 2024 dollars.[163]

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[158] *See id*.
[159] *See* Hogan Test. at 37: 21-23 – 38: 1-5.
[160] *See* MISO Benefits Analysis Slideshow at 34-35.
[161] *See* Hogan Test. at 37: 1-23 – 38: 1-11 – 39: 1-6.
[162] *See id.*
[163] *Id.* at 40-41, Figure 2. For a variety of reasons, the Arkansas Public Service Commission believes that any decarbonization benefits are even lower.

4. MISO Artificially Inserted the Flex Units to Achieve Resource Adequacy

MISO realized early on that relying solely on the construction of Tranche 2.1 to interconnect enough remote renewable generation to meet state and utility goals would lead to an unreliable bulk electric system. To remedy this, MISO artificially inserted the siting of 29.8 GW of Flex Units. MISO characterized these Flex Units as having the operational capabilities of efficient gas turbines but without carbon effluents; in other words, generation technology that does not exist. By siting these artificial resources strategically throughout the Midwest region, MISO was able to conclude that the remote renewable resources would be reliably delivered to load and resource adequacy would be achieved.

There are several significant flaws with MISO's approach. First, the Flex Unit technology does not exist. If it does not exist, then it cannot be installed to stabilize the system. Relying on the invention of future technology to ensure current system reliability is irresponsible. In addition, MISO's modeling depends on these Flex Units to come online in only a few years, modeling 25 GW of these resources by 2027.[164]

Second, even if the technology existed today, no utility or developer has obligated itself to build these Flex Units. These resources are not found in any utility's IRP because they do not exist. MISO cannot rely on resources that no one has committed to build.

Third, if the Flex Units had the capabilities that MISO describes, and if MISO was relying on them to be built, MISO should have reduced the future projected resource capacity. The Flex Units have higher accreditation values than wind and solar resources in the Future 2A portfolio. In other words, the Flex Units would obviate the need for some of these other resources. The IMM argued that these Flex Units would likely be a combination

[164] *See generally* MISO Benefits Analysis Slideshow at 8.

of hybrid renewables, energy storage, and new gas-fired resources, all of which have much higher accreditation values than the intermittent renewables, which would allow states to achieve clean energy goals with significantly fewer renewable resources (*e.g.,* 113 GW based on the IMM's future scenario).[165]

The IMM created a modified Future 2A scenario assuming that the Flex Units are comprised of equal shares of the technologies listed above and found that it would meet state carbon goals and MISO's energy adequacy needs with $88 billion less in capacity costs than Future 2A.[166] Importantly, this displacement of a large share of the assumed intermittent renewable generation would likely substantially lower the transmission needs Tranche 2.1 is designed to address.

By relying on remotely located renewable resources to effectuate the decarbonization and/or clean energy goals of these states and utilities, and by siting (for modeling purposes) artificial Flex Units that would have to be built to facilitate interconnection and delivery of these remote resources, MISO is again displacing states and utilities as the resource planners and over building the transmission system through Tranche 2.1.

5. MISO Understated Transmission Expansion Expenses by Failing to Include the Network Upgrades on PJM's Transmission System to be Paid by MISO's Load.

MISO's Tranche 2.1 costs used in the business case failed to include the expenses MISO has committed to incur to make upgrades on PJM's transmission system. The

[165] *See* Hogan Test. at 21: 17 – 22: 1-7.
[166] *See* Midcontinent Independent System Operator, Inc., Oct. 30, 2024, Board Meeting Minutes at 1-2, https://cdn.misoenergy.org/20241210%20System%20Planning%20Committee%20of%20the%20BOD%20Item%2003%20Minutes%2020241030665352.pdf ("Dr. Patton stated this results in a Future 2-A that the IMM estimates to be $88 billion more costly than an alternative case.").

Concerned Commissions learned for the first time on June 25, 2025, six months after the MISO Board approved Tranche 2.1, that MISO and PJM agreed to study any and all transmission upgrades PJM deems necessary to address any reliability issues on PJM's system caused by Tranche 2.1.[167]

At that meeting, MISO committed to pay the full cost of these projects, which costs will be passed on to MISO ratepayers. When asked, neither MISO nor PJM representatives could identify the magnitude of these projects or the approximate cost.

Importantly, these projects should have been determined before the MISO Board approved Tranche 2.1 and the costs, because they are a direct result of Tranche 2.1 construction, should have been included in the business case. Failure to include them in the benefit-cost analysis results in an artificially high benefit-to-cost ratio.

6. Without MISO's Inaccurate Modeling and Assumptions, LRTP Tranche 2.1 Does Not Qualify as an MVP Portfolio under Tariff Attachment FF

After correcting MISO's assumptions and analysis, the benefits of the Tranche 2.1 projects are significantly less than the costs. Because the MISO Board relied on MISO's inaccurate assumptions and analysis, and an inaccurate business case, MISO violated the Tariff by misclassifying Tranche 2.1 as MVPs.[168]

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[167] *See* PJM Interconnection L.L.C., PJM Update on Analysis of MISO Tranche 2.1 (June 25, 2025) https://cdn.misoenergy.org/20250625%20MISO-PJM%20IPSAC%20Item%2001%20PJM%20Update%20on%20Analysis%20of%20MISO%20LRTP%20T2.1704093.pdf (Exhibit 5).

[168] *See, e.g., Midwest Indep. Transmission Sys. Operator, Inc.*, 141 FERC ¶ 61,068, at P 50 (2012) (stating that "[r]elying on outdated model assumptions . . . could result in the construction of unneeded facilities"); *Midwest Indep. Transmission Sys. Operator, Inc.,* 146 FERC ¶ 61,013, at P 22 (2014) (stating that the use of incorrect system conditions and study assumptions can "lead to the identification of the wrong network upgrades that do not address the system's actual reliability needs"); *Midwest Indep. Transmission Sys. Operator, Inc.,* 135 FERC ¶ 61,222, at P 24 (2011) (finding that the use of inaccurate modeling assumptions has the potential to adversely affect reliability and result in inaccurate cost assignment).

At the low end, MISO quantifies the Avoided Capacity Costs, Mitigation of Reliability Issues, and Decarbonization benefits of Tranche 2.1 at $38.3 billion in 2024 dollars over twenty years, making up approximately 74 percent of benefits in this scenario.[169] After correcting MISO's assumptions and analysis, Dr. Hogan quantifies the total benefits of these metrics at approximately $4.3 billion at the low end and approximately $7.2 billion at the high end.[170] Dr. Hogan estimates the benefits of Tranche 2.1 to be significantly below the approximately $28.5 billion net present value cost (approximately $22 billion in capital costs, plus approximately $6.5 billion in O&M expenses and carrying costs),[171] with an approximately 0.55 benefit-cost ratio at the low end and an approximately 0.68 benefit-cost ratio at the high end.[172] Because Tranche 2.1 has a benefit-cost ratio of less than 1.0 when project benefits are calculated correctly, Tranche 2.1 does not qualify as an MVP portfolio under Tariff Attachment FF and was improperly designated as such by the MISO Board.

C. MISO's Tranche 2.1 is Designed to Effectuate the Renewable Energy Goals of Certain States and Utilities at the Expense of Others; Results-Oriented Planning that is Unduly Discriminatory

1. Through its Development of Tranche 2.1, MISO is Acting as a Resource Planner

MISO claims that it is not a resource planner; that it is relying on member system resource plans to develop Tranche 2.1. In fact, MISO is relying on the plans of only some members/states but not all. While some states have ambitious clean energy goals (*e.g.,* Minnesota, Michigan, and Illinois), other states like Mississippi and Arkansas have none.

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[169] *See* Hogan Test. at 40-41, Figure 2.
[170] *See id.*
[171] *Id.* at 15: 6-9 ("This is the Tranche 2.1 projects with a cost of $21,868 million in $2024USD capital costs ($28,525 million in $2024USD total cost used in cost benefit analysis including O&M expense and carrying costs, based on a 7.10% discount rate.").
[172] *See id.* at 40-41, Figure 2.

Some states, like North Dakota, are in fact prohibited by law from considering clean energy-related metrics like cost-of-carbon from being relied upon to justify infrastructure (*e.g.,* transmission) investment.[173]

2. MISO's Tranche 2.1 Incentivizes Remotely Located Renewable Generation

By siting renewable generation remotely to meet certain state and utility goals, MISO creates an artificial need for enormous transmission investment (*i.e.,* Tranche 2.1 is estimated at approximately $22 billion). Absent Tranche 2.1, these utilities/states would meet their goals by developing resources closer to load.

The decision to rely on renewable resources located far from load and building Tranche 2.1 to deliver that energy, rather than building generation closer to load, is an economic decision. First, states that prefer relying on out-of-state generation to serve load would, in the absence of Tranche 2.1, have to pay for the full cost of transmission to deliver their energy. Tranche 2.1 allows certain states and utilities to purchase their preferred resources and achieve decarbonization goals while paying only a fraction of those transmission costs. Because MISO will allocate Tranche 2.1 costs using a postage stamp rate that will be collected from customers located throughout the MISO Midwest subregion, these states and utilities with clean energy and decarbonization goals will pay less while avoiding the higher cost of building local renewable generation.

By ordering construction of Tranche 2.1, which is being built to deliver wind generation from MISO west to the east, MISO is deciding what generation will be built going forward without regard to those states that prefer to use resources with a different

[173] N. D. Cent. Code § 49-02-23 (prohibiting North Dakota or electric utilities in the state from using environmental externalities in the planning, selection, or acquisition of electric resources or the setting of rates for providing electric service).

fuel source (*e.g.,* gas fired, nuclear, solar) that will not use Tranche 2.1 to deliver energy to their load.

Classifying the Tranche 2.1 projects as MVPs allows states with ambitious clean energy goals to shift transmission costs (to deliver their remote energy) to other states that either do not share the same clean energy goals or have decided to build their renewable and other resources closer to load.

3. MISO's Modeling Implies that Some Utilities are not able to Meet Their State's Renewable Energy Goals Without Leaning on Neighboring States

MISO insists that Future 2A is based on resource expansion plans of its member utilities and states. But then MISO adds 29.8 GW of Flex Units on top of the utility planned generation. As MISO explains, the Flex Units ensure that the system will operate reliably (*e.g.,* provide the needed ancillary services and dispatchable generation to compensate for periods when renewable units have lower output). That demonstrates, at least in MISO's eyes, that some utility resource plans (that are primarily renewable generation) are inadequate to ensure reliable service. If the few utilities/states with ambitious renewable energy goals need Tranche 2.1 and the artificial Flex Units to meet their goals, then they are clearly choosing to lean on other MISO members (*e.g.,* transmission owners, developers, load) to reduce their cost to meet these goals by avoiding the obligation to build generation closer to load. Someone will have to build and pay for the Flex Units that MISO found critical to maintaining reliability with the Future 2A resource mix even with Tranche 2.1. And, if Flex Unit technology does not exist, then the replaced resource is likely to be natural gas fueled. If natural gas fired generation is inconsistent with those ambitious state policies, they will have to be built out-of-state, which suggests that they will be relying on other states to construct and pay for those gas assets.

There is little question that those states with ambitious clean energy and decarbonization policies will be leaning on states that do not share those policies. It is equally obvious that MISO recognizes and is aiding this dynamic.

4. Designating Tranche 2.1 Projects as MVPs Inappropriately Shields Cost Causers from Covering the Appropriate Costs

By designating the Tranche 2.1 projects as MVPs, MISO is able to direct construction of transmission projects designed to enable some states and utilities to meet their clean energy and decarbonization goals while (i) reducing the network upgrade costs these states would pay (through power purchase agreements with new generation siting remotely), (ii) avoiding the capital cost of constructing local renewable generation to serve their load, and (iii) inappropriately shifting the cost to build Tranche 2.1 to others.

Most of MISO's transmission project cost allocation is based on cost causation; that is, those who cause the cost to be incurred must pay. New load or generation[174] seeking interconnection is responsible for some or all of the network upgrade costs. Projects to promote NERC reliability criteria compliance,[175] local reliability[176] and local economics are paid for by the retail customers of the transmission owner building the projects. MEPs are based on three specified benefit metrics incorporated into the MISO tariff and specifically accepted by FERC. In each case, the cost causer or beneficiary can be identified with precision.

The MVP criteria, on the other hand, consider a wide range of potential benefits, some real and some hypothetical, and most not FERC-approved, that MISO will rely upon

[174] *See* MISO Tariff, Attachment FF, § III.A.2.d.
[175] *See id.* § III.A.2.c (explaining that the cost of a Baseline Reliability Project is recovered by the Transmission Owner where the portion of the Baseline Reliability Project is physically located).
[176] *See id.* § III.A.2.k (describing cost allocation for other Network Upgrades included in MTEP that do not meet the criteria for categories specifically enumerated under Attachment FF).

to justify the business case of a group of projects (like Tranche 2.1). The MVP criteria include a catch-all provision that allows MISO to identify new benefit metrics that are unvetted and unreliable to satisfy the required business case. Satisfying the MVP criteria allows MISO to allocate the cost to all MISO Midwest load without verifying whether specific load actually receives a net benefit. This approach is fundamentally inconsistent with cost causation because there is no determination that costs are roughly commensurate with benefits.

MISO's efforts to designate the Tranche 2.1 projects as MVPs ran into several hurdles. The benefit metrics MISO used to justify the earlier Tranche 1 projects were insufficient to cost justify Tranche 2.1. In fact, MISO calculated that some states like North Dakota would actually see an increase in locational marginal prices.[177]

MISO solved that problem by using the new metrics described above that relied on assumptions and inputs that are false to artificially boost estimated benefits above the threshold needed to justify a business case for Tranche 2.1. Dr. Hogan describes in detail why these metrics do not represent actual benefits that would justify classifying Tranche 2.1 as MVPs.

D. The MISO MVP Process Lacks Regulatory Oversight and Cost Control

To be clear, the Concerned Commissions are not attacking MISO's MVP Tariff provisions, only that Tranche 2.1 does not meet the criteria to be classified as an MVP.

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[177] *See* Midcontinent Independent System Operator, Inc., *LRTP Workshop – Reliability & Economic Deep Dive Analysis Review Presentation*, at 32 (Sept. 24, 2024) https://cdn.misoenergy.org/20240924%20LRTP%20Workshop%20Item%2004%20Tranche%202.1%20Reliability%20and%20Economic%20Deep%20Dive%20Analysis%20Review649710.pdf (explaining that Tranche 2.1 will increase locational marginal prices in Local Resource Zone 1 by $1.87/MWh). A cost increase is likely more for a state like North Dakota located in a wind-rich area. However, MISO does not and will not break these costs and supposed benefits down by state or Transmission Pricing Zones.

We ask that FERC also consider the lack of regulatory oversight over MISO's transmission planning process. When a utility builds a transmission facility at the state level, the state has jurisdiction over siting and cost recovery. The state can take action to determine whether the assumptions justifying the transmission upgrade are consistent with good utility practice. The state can evaluate the cost and hold the utility liable for unwarranted cost overruns through the state process (*e.g.,* prudence hearings). And the state can decide whether all the transmission upgrade costs are recoverable in retail rates.

In contrast, and in the absence of a complaint filed at FERC, there is no regulatory oversight of MISO's MVP plans. The Tariff permits MISO to model the system, make assumptions, propose projects, and then direct their construction. Input from states and stakeholders is advisory only and easily disregarded. While states have regulatory authority over siting, they do not control costs, which are recovered through FERC-jurisdictional Tariffs.[178] MISO does not file at FERC for cost recovery authorization. There is no public forum where these costs are discussed and addressed by a regulatory body.

As MISO has pronounced, Tranche 2.1 is the largest investment in transmission facilities in U.S history -- $22 billion. This Complaint is the only way the Concerned Commissions can ensure a regulatory review on behalf of ratepayers.

As FERC is aware, MISO's IMM raised many of the concerns addressed in this Complaint in MISO stakeholder meetings, directly with MISO, and before the MISO Board. Those concerns fell on deaf ears. Rather than responding substantively to the IMM's concerns, the MISO Board sought to silence the IMM by denying it compensation

[178] *See Nantahala Power & Light Co. v. Thornburg*, 476 U.S. 953, 966 (1986) ("Once FERC sets [a wholesale] rate, a State may not conclude in setting retail rates that the FERC-approved wholesale rates are unreasonable. Rather, a State must give effect to Congress' desire to give FERC plenary authority over interstate wholesale rates, and to ensure that the States do not interfere with this authority.").

under its contract when monitoring transmission planning assumptions.[179] The IMM plays a critical role as it is the only independent and purely objective party in the transmission planning process. At no other time has MISO sought to silence the IMM's critique of MISO processes, which are intended to improve MISO's markets and performance.

Fortunately, FERC decided that under the Tariff, the IMM has the authority to evaluate and critique MISO's transmission planning assumptions. That authority was clarified July 18, 2025, in the Order on Petition.

In his concurrence, Chairman Christie notes as follows:

> That transmission planning affects RTO markets is factually undeniable and thus makes this order an easy legal call. Moreover, the many special interest groups which have lobbied for ever more transmission spending driven by transmission planning regulations have long argued that FERC has the legal authority to impose transmission planning regulations such as Orders No. 1000 and 1920 because transmission planning affects rates, ergo FERC has authority under the Federal Power Act to impose ever more expansive planning requirements on transmission providers, RTO and non-RTO alike. By similar logic, analyzing and critiquing the impact on rates of an RTO's transmission planning and proposals clearly fall within the core duties of a market monitor.[180]

Chairman Christie acknowledges the costly effects of transmission investment driven by MISO's policies.

> Transmission costs are driven not by the price of fuels such as natural gas, coal or oil, which change literally hourly and are set in global markets, but by capital expenses ("capex"), which are a result of intentional planning and intentional policy decisions, in this case by the management of MISO.[181]

[179] *See Midcontinent Independent System Operator, Inc.*, Petition for Declaratory Order, Docket No. EL25-80-000 (filed May 7, 2025).
[180] Order on Petition, Comm'r Christie Concurrence, P 1.
[181] *Id.* at P 3.

Finally, Chairman Christie acknowledges the role that the IMM and State regulators have in checking the interests of certain special interest groups.

> It is no coincidence that the IMM's actions herein are strongly defended by state regulators and consumer advocates. Speaking personally from experience, during my 17 years as a state commissioner in PJM, it was state regulators and consumer advocates who consistently defended the role of the PJM IMM in bringing inconvenient facts to light, as well as a different analysis of those facts, when rent-seeking special interests wanted the IMM muzzled or fired.[182]

MISO has forecasted a $100 billion spend on Tranches 1 through 4. To date, MISO has reached $33 billion (Tranches 1 and 2.1). And, as Chairman Christie explains:

> [T]he original sticker price of an asset to be constructed is merely a fraction of the ultimate cost to consumers, because financing costs, such as return on equity (ROE), over the life of the project will be added in, and the ultimate price will be several multiples of the sticker price.[183]

Consider the Morrison to Hiple line, approved by the MISO Board in Tranche 1, which has already more than doubled its original cost estimate.[184] There must be a process going forward to ensure that MISO's assumptions and calculations are objective and realistic.

For these reasons, the Concerned Commissions include as a requested remedy that MISO be directed to file at FERC all future business cases used to support MVPs. This requirement will provide stakeholders, state commissions, and FERC an opportunity to

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[182] *Id.* at P 6.
[183] *Id.* at P 4.
[184] *See* Amanda Durish Cook, *MISO to Make Transmission Re-evaluation Process More Public*, RTO Insider, Jun. 1, 2025, https://www.rtoinsider.com/106769-miso-make-tx-reevaluation-process-more-public/#:~:text=Incumbent%20developer%20Northern%20Indiana%20Public,from%20MISO%27s%20estimated%20%24261%20million ("Incumbent developer Northern Indiana Public Service Co.'s 345-kV Morrison Ditch-Reynolds-Burr Oak-Leesburg-Hiple line, in Illinois and Indiana, now is expected to cost $675 million, up from MISO's estimated $261 million.").

review and comment on metrics used to justify billions of dollars in transmission investment; an approach that will hopefully fill this regulatory gap without having to resort to complaints.

V. REQUESTED RELIEF

The Concerned Commissions respectfully request that FERC (i) find that MISO and the Board violated the Tariff and (ii) direct the Board to declassify Tranche 2.1 projects as MVPs, and (iii) order MISO to revise its Tariff to require a filing of the business case supporting future LRTP MVP projects to be reviewed and approved by FERC.

VI. REQUEST FOR FAST TRACK PROCESSING

The Concerned Commissions respectfully request Fast Track processing and that FERC act on this Complaint expeditiously. FERC should expedite its review of this Complaint to prevent Transmission Owners from moving forward with approximately $22 billion worth of Tranche 2.1 Network Upgrades that MISO has improperly designated as MVPs in violation of its Tariff.

Expeditious action on this Complaint will prevent retail ratepayers in MISO's footprint, including those under the jurisdiction of the Concerned Commissions, from having to pay for projects that have been mis-classified as MVPs. Until these projects are properly classified and correctly cost allocated consistent with cost causation and beneficiary pays principles, expedited action is needed to prevent constructing Transmission Owners from sinking costs in the Tranche 2.1 projects. Given these considerations, the Concerned Commissions respectfully request that FERC issue an order granting this Complaint as soon as practicable but no later than October 1, 2025, to prevent substantial irreversible harm to retail ratepayers in MISO.

VII. COMMUNICATIONS

The Concerned Commissions request that all correspondence and communications regarding this filing be addressed to the following persons, who should be placed on FERC's official service list in this proceeding:

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VIII. RULE 206 FILING REQUIREMENTS

A. Rules 206(b)(1) and (2): How Action or Inaction Violates Applicable Statutory Standards or Regulatory Requirements

As discussed above in Sections III and IV, the decision of the MISO Board to designate the LRTP Tranche 2.1 portfolio of projects as MVPs violated Attachment FF of the Tariff and was therefore unjust, unreasonable, unduly discriminatory, and preferential in violation of the FPA.

B. Rule 206(b)(3): Business, Commercial, Economic or Other Issues Presented by the Action or Inaction as Such Relate to or Affect the Complainants

As discussed above in Sections III and IV, MISO violated its Tariff by improperly designating Tranche 2.1 as an MVP portfolio, which will lead to improper allocation of the portfolio's costs to the detriment of the retail ratepayers under the Concerned Commissions jurisdiction. As state commissions, the Concerned Commissions are responsible for ensuring their jurisdictional utilities provide reliable service to retail customers at a reasonable cost. Because they lack jurisdiction to adjust wholesale transmission charges that are unjust, unreasonable, unduly discriminatory or preferential, the Concerned Commissions rely on FERC to reverse the misclassification of these projects and ensure MISO's compliance with the Tariff.

C. Rules 206(b)(4) and (5): Quantification of the Financial Impact or Burden Created for the Complainants and the Practical, Operational, or Other Nonfinancial Impacts Imposed as a Result of the Action or Inaction

As discussed above in Sections III and IV, the retail ratepayers under the Concerned Commissions' jurisdiction will be required to pay postage stamp pricing for the approximately $22 billion Tranche 2.1 portfolio without FERC intervention.

D. Rule 206(b)(6): Whether the Issues Presented are Pending in an Existing Commission Proceeding or a Proceeding in Any Other Forum in Which the Complainant(s) is a Party, and if so, Why Timely Resolution Cannot be Achieved in that Forum

The issues raised in the Complaint are not pending in an existing FERC proceeding or a proceeding in any other forum. A similar issue is pending in Docket No. EL22-83-000.

E. Rule 206(b)(7): Specific Relief or Remedy Requested, Including Any Request for Stay or Extension of Time, and the Basis for that Relief

Concerned Commissions' specific relief requested is discussed above in Section V.

F. Rule 206(b)(8): Documents that Support the Facts in the Complaint in Possession of, or Otherwise Attainable by, the Complainant, including, but not limited to, Contracts and Affidavits

The following exhibits are attached in support of the Complaint:

Exhibit 1 – Testimony of William Hogan
Exhibit 2 – LRTP Workshop – LRTP Tranche 2 Business Case Benefit Metrics Presentation
Exhibit 3 – Memorandum from David Patton, Potomac Economics, to the Midcontinent Independent System Operator
Exhibit 4 – North Dakota Public Service Commission, Comments on MISO Tranche 2.1
Exhibit 5 – PJM Update on Analysis of MISO Tranche 2.1
Exhibit 6 – Form of Notice

G. Rule 206(b)(9): (i) Whether the Enforcement Hotline, Dispute Resolution Service, Tariff-based Dispute Resolution Mechanisms, or Other Informal Dispute Resolution Procedures were Used, or Why These Procedures Were Not Used; (ii) Whether the Complainants Believe that Alternative Dispute Resolution (ADR) under the Commission's Supervision Could Successfully Resolve the Complaint; (iii) What Types of ADR Procedures Could be Used; and (iv) Any Process That Has Been Agreed on For Resolving the Complaint

The Concerned Commissions have not used FERC's informal dispute resolution procedures. They have been engaged in the stakeholder process since MISO first publicly launched the LRTP process. They have voiced their concerns in the stakeholder meetings

and with MISO directly. They have submitted feedback expressing their concerns, all of which fell on deaf ears. MISO and the MISO Transmission Owners are moving ahead with all haste to begin construction. MISO representatives have stated that they intend to move forward with Tranches 2.2 and 3 in 2026. Considering MISO's ambitious schedule and its failure to address concerns raised by stakeholders and the IMM, the Concerned Commissions do not believe that dispute resolution will be either timely or effective.

H. Rule 206(b)(10): Form of notice of the complaint suitable for publication in the FEDERAL REGISTER in accordance with the specifications in §385.203(d) of this part

The form of notice shall be on electronic media as specified by the Secretary. A form of notice suitable for publication in the Federal Register is attached.

I. Rule 206(b)(11): Need for Fast Track processing and why the standard processes are not adequate

The Concerned Commissions request (i) that an order granting the Complaint be issued expeditiously or (ii) if the Complaint is set for hearing, Fast-Track processing. The Concern Commissions explain the need for Fast Track processing in Section VI above.

J. Rule 206(c): Service of the Complaint on the Respondent, Affected Regulatory Agencies, and Others the Complainant Reasonably Knows may be Expected to be Affected by the Complaint

A copy of this Complaint and all exhibits has been served in accordance with this requirement.

IX. CONCLUSION

MISO's selection of LRTP-prompted transmission projects to-date exceeds $33 billion. When studied correctly, the forecasted benefits of these projects fall well below the costs and therefore, are misclassified as MVPs. MISO makes numerous assumptions that erroneously inflate benefits and underestimate costs. These concerns have been raised

to MISO but not appropriately remedied. In its efforts to promote the economic and clean energy goals of a few states, MISO violates the Tariff. MISO has identified, and the Board has approved, Tranche 2.1 projects that will result in costs greatly in excess of benefits and therefore each have violated the Tariff. As former Commissioners Phillips and Clements emphasized:

> **A bedrock requirement of this final rule is that customers will only be required to pay for a share of a Long-Term Regional Transmission Facility to the extent they benefit from that facility. That is cost causation 101.** While we provide transmission planners, in cooperation with their state regulators, ample flexibility to determine how to satisfy that bedrock requirement, **any cost allocation methodology that causes customers to pay for projects from which they do not benefit—or to pay a cost share out of proportion to the benefits they draw from the project—would be patently unjust and unreasonable.**[185]

MISO's misclassification of Tranche 2.1 projects as MVPs violates this bedrock requirement – it ensures that customers who will receive no net benefits will nevertheless pay a share of the Tranche 2.1 cost – a result that is patently unjust and unreasonable.

The Concerned Commissions respectfully request that FERC (i) find that MISO and the Board violated the Tariff, (ii) direct the MISO Board to declassify Tranche 2.1 projects as MVPs, and (iii) order MISO to revise its Tariff to require a filing of the business case supporting future LRTP tranches to be reviewed and approved by the FERC.

[185] Order No. 1920, 187 FERC ¶ 61,068 (Phillips & Clements, Comm'rs, concurring at P 18) (emphasis added).

Dated: July 30, 2025

Respectfully submitted,

/s/ Jill Kringstad

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CERTIFICATE OF SERVICE

I certify that on July 30, 2025, I served the foregoing Complaint upon Midcontinent Independent System Operator, Inc., and all affected regulatory agencies in accordance with 18 C.F.R. §§ 385.2010(f)(3), 385.206(c).

Respectfully submitted,

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