UNited States Of America
Before The
Federal Energy Regulatory Commission
Midcontinent Independent System Operator, Inc. and MISO Transmission Owners


1. Overview

The Clean Energy Advocates appreciate the opportunity to submit supportive comments to MISO’s and the TOs’ Tariff filing. The Clean Energy Advocates believe that the proposed

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1 Each joint commenter has previously moved to intervene in this proceeding pursuant to Rule 214 of the Commission’s Rules of Practice and Procedure. 18 C.F.R. § 385.214. The views and opinions expressed in this document do not necessarily reflect the official position of each individual member of the American Clean Power Association.

Tariff revisions are consistent with Order No. 1000 and the Commission’s Advanced Notice of Proposed Rulemaking on regional transmission planning and cost allocation and generator interconnection reforms. For the reasons below, Clean Energy Advocates respectfully request that the Commission approve MISO’s and the TO’s filing.

a. **MISO’s and the TOs’ proposed tariff revisions**

MISO and the TOs propose to revise the current cost allocation methodology for certain transmission expansion projects known as Multi-Value Projects (“MVP”). Under the current Tariff terms, the costs of MVP projects are allocated to all load in MISO’s footprint using a postage-stamp (per-megawatt-hour) charge. MISO’s original and only tranche of MVP projects was approved in 2011, prior to the utilities in what is now the South subregion joining MISO. MISO is considering a series of new portfolios of transmission expansion projects stemming from the Long-Range Transmission Planning (“LRTP”) process, including “Tranche 1” (to be considered by the MISO Board in 2022), “Tranche 2” (2022/2023) located in the Midwest subregion, “Tranche 3” (2023/2024) located in the South subregion, and “Tranche 4” (2023/2024) addressing the North/South transmission constraint. These new projects would likely meet the criteria for MVP under the current Tariff, if not for the existing definitional requirement that an MVP portfolio must have benefits spread broadly across the full MISO footprint.

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4 Multi-Value Projects are defined in Section II.C of Attachment FF to the MISO Tariff. The definition includes three conditions: first, an MVP must be evaluated as part of a portfolio of projects in MISO’s transmission expansion planning process, with benefits spread broadly across the whole MISO footprint. Second, one of the following three conditions must obtain: (i) the MVP has the purpose of enabling support of a state or federal regulatory requirement that places minimum or maximum limits on certain generation types; (ii) the MVP provides multiple types of economic value across multiple pricing zones with a benefit-cost ratio of at least 1.0; or (iii) the MVP project addresses at least one transmission system issue associated with a projected reliability standard violation, and at least one economic-based transmission system issue that provides economic value across multiple pricing zones, and the project provides quantifiable net benefits. Third, the project must (i) be new; (ii) be evaluated through MISO’s transmission expansion planning process and approved by the MISO Board before the start of construction; (iii) not be part of a specific list of excluded projects; (iv) have a capital cost of at least $20 million; (v) include transmission facilities operating at voltages above 100 kV; and (vi) not be driven solely by an interconnection request or a request for point-to-point transmission service. Tariff, Attach. FF, §§ II.C.1–II.C.3.

5 *Id.* §§ II.C.1, III.A.2.g; Attach. MM § 5. The usage charge also applies to external transactions sinking outside MISO.


7 Johnson Direct at 21:7–12.
footprint, which is unlikely today given the limitations of the North/South transmission constraint.  

MISO and the TOs propose the following revisions to Attachment FF of the Tariff. First, the definition of MVP would be modified so that benefits could be “spread broadly” across only a single subregion (i.e., Midwest or South) or across the entire MISO footprint. Second, cost allocation for MISO Transmission Expansion Planning (“MTEP”) projects shall be clarified so that cost responsibility shall be “at least roughly commensurate with the benefits.” Third, cost responsibility, while still postage-stamp-based, will, in a departure from the current MISO-wide allocation, be based on the location of the benefits: allocated MISO-wide for an MVP portfolio with benefits broadly spread across the MISO system-wide footprint; allocated to customers within the Midwest subregion for an MVP portfolio with benefits broadly spread across only the Midwest subregion; or allocated to customers within the South subregion for an MVP portfolio with benefits broadly spread across only the South subregion. Finally, the filing parties propose a new attachment better delineating, including a visual map, the Midwest and South subregions for MVP cost allocation purposes.

The filing parties requested an effective date of May 19, 2022, for the proposed Tariff revisions. According to the filing parties, this would enable the MISO Board at its June 2022 meeting to approve the first new tranche of LRTP projects (to be built in MISO’s Midwest subregion) under the new cost allocation methodology.

b. MISO’s and the TOs’ proposed Tariff changes are the product of an extensive, inclusive, and collaborative stakeholder process

The stakeholder process that produced MISO’s and the TOs’ proposed subregional cost allocation methodology included nearly a year of formal and informal discussions, several rounds of written comments, and close coordination with state regulators through MISO’s Organization of MISO States (“OMS”) that established its own Cost Allocation and Planning Methodology Program (CAPM).

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10 MVP projects are one category among others under the broader umbrella of MTEP projects.
11 Transmittal Letter at 31 (modifying Tariff, Attach. FF, § III).
12 Id. at 31 (modifying Tariff, Attach. FF, § III.A.2.g).
13 Id. at 32 (creating new Attachment XX and modifying Module A).
Committee (“CAPCOM”) to explore LRTP cost allocation approaches and outcomes. The bulk of the substantive discussions were carried out in the RECBWG’s meetings. The discussions in the RECBWG were informed by discussions at MISO’s PAC and a series of LRTP Workshops that kept stakeholders abreast of the planning process and the ongoing exploration of the drivers for and evaluation of potential LRTP transmission solutions.

Throughout these discussions, a primary point of contention was the appropriate cost allocation for LRTP projects that are primarily intended to provide regional reliability benefits. In particular, the discussions centered on whether to apply a granular allocation of financially quantifiable benefits versus a postage stamp approach, which recognizes a wide range of regional benefits that change over time. MISO thoroughly investigated the criteria that defines the project types that qualify for regional cost sharing, the benefits associated with each of them, and the appropriateness of utilizing MISO’s existing cost allocation methodologies to apply to future LRTP projects. These issues were discussed openly and transparently during RECBWG meetings. MISO regularly solicited written comments and suggestions from stakeholders, and MISO’s stakeholders actively engaged in the discussions.

Over the course of these stakeholder discussions, and as the exploration of LRTP solutions continued, it became clear that the LRTP projects will deliver multiple benefits beyond their primary purpose of maintaining regional reliability. In addition to bolstering regional reliability, the transmission projects identified through the LRTP will relieve economic congestion, increase transfer capability, improve resilience, and enable public policies and/or corporate clean energy and carbon reduction goals. Given the wide range of benefits projected to be delivered by LRTP projects, MISO and its stakeholders determined that the MVP project category was more closely aligned to the anticipated LRTP projects than the Market Efficiency Project (“MEP”) type that also qualifies for regional cost sharing in MISO.

While the need for an LRTP planning process to address transmission issues arising from the challenges of a changing resource fleet throughout MISO was met with dissent from the

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15 Appendix 1 of this filing provides a brief summary of these meetings, including an overview of the many topics that were covered in MISO’s Regional Expansion Criteria and Benefits Working Group (“RECBWG”) and MISO Planning Advisory Committee (“PAC”) stakeholder entities and those presented in the LRTP Workshops that were requested by stakeholders seeking a better understanding of the drivers for LRTP projects and the process of selecting and qualifying the projects that may ultimately be subject to the revised MVP tariff proposal.

16 In this case granular means a more specific analysis of benefits, beneficiaries, and allocation of costs based on this analysis rather than broad cost sharing such as postage stamp.

OMS representatives of the state regulators of Louisiana and Mississippi, and the City of New Orleans, in an OMS position paper dated from June 2019, a consensus coalesced around cost allocation principles in 2021.

There was an expressed desire from some stakeholders to pursue a more granular approach, which resulted in a proposal from some regulatory staff and TOs in the MISO South subregion. However, the overwhelming majority of stakeholders found consensus that a cost allocation enabling LRTP Tranches 1 and 2 is necessary to maintain regional reliability and an affordable and competitive MISO power market. Furthermore, the majority of stakeholders agree that an assessment of benefits that accounts for the North/South constraint between the Midwest and South subregions, is appropriate. With regard to assessing benefits in the event of a transmission solution delivering higher transfer capacity between the Midwest and South subregions, MISO has openly communicated to stakeholders that this is a possible ‘trigger’ to re-engage discussions about a possible modification of a subregional cost allocation approach.

2. **MISO’s and the TOs’ proposal to study the regional benefits of LRTP projects in separate MISO South and MISO Midwest Subregions in the MTEP is just and reasonable**

   MISO anticipates that the LRTP transmission portfolios could meet the qualifying criteria under the MVP Tariff. The LRTP is based on future scenarios that use robust and forward-looking forecasts of MISO’s energy generation mix and demand requirements. LRTP projects will primarily address regional reliability violations while also reducing economic congestion across multiple pricing zones. In addition, the LRTP portfolio will generate “total financially quantifiable benefits … in excess of total project costs.” MISO will assess a number of

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22 Tariff, Attach. FF § II.C.7.

23 *Id.* § II.C.2(c).
quantifiable transmission-related benefits including congestion, decarbonization, and reliability to ensure that any portfolio of LRTP projects meets the required benefit to cost ratio.

MISO initiated the LRTP based on the findings from its earlier planning study—the Renewable Integration Impact Assessment (“RIIA”)—which concludes that regional transmission expansion is a key element to mitigating reliability risks while facilitating the generation resource plans of its member utilities and states.\textsuperscript{24} This finding is consistent with the Commission’s recent acknowledgement that a transmission planning process that does not plan for the needs of anticipated future generation is unlikely to develop facilities that will more efficiently or cost-effectively meet the needs of the changing resource mix.\textsuperscript{25} Notably, the RIIA demonstrated that the existing grid in MISO’s service territory will begin to pose reliability challenges as the penetration of renewable energy exceeds 30 percent, which the study indicates could be reached as soon as 2026.\textsuperscript{26}

Clean Energy Advocates agree with MISO’s assessment that the most recent LRTP results indicate that Tranches 1 and 2 could qualify as MVPs because they provide a combination of regional reliability, economic and public policy benefits.\textsuperscript{27} Further, The Brattle Group’s analysis of the existing MVP projects approved in MTEP\textsuperscript{11},\textsuperscript{28} which are used as a proxy for future portfolios, demonstrates that the new LRTP portfolios would likely have benefits spread widely through MISO’s Midwest subregion but that the flow of benefits would likely be significantly constrained and minimal in the MISO South subregion due to the limited transfer capability between the MISO Midwest and MISO South subregions.\textsuperscript{29}

Moreover, as Figure 1 below demonstrates, a large portion of the MISO Midwest subregion lacks the requisite transmission needed to accommodate any new generation capacity. Figure 1 highlights the urgency of bolstering the regional grid in the MISO Midwest subregion because the current backbone grid in the northwestern portions of MISO’s footprint—where the wind resources are the most cost-effective—cannot enable any new resource interconnection to meet

\textsuperscript{25} Building for the Future Through Elec. Reg’l Transmission Planning and Cost Allocation and Generator Interconnection, 176 FERC ¶ 61,024, at P 34.
\textsuperscript{26} Transmittal Letter at 14.
\textsuperscript{27} The project portfolio’s quantifiable benefits include congestion relief, fuel savings, and decarbonization. Pfeifenberger Direct at 22–23.
\textsuperscript{28} MTEP\textsuperscript{11} is the portfolio of MVP projects that MISO approved in 2011. Doner Direct at 12:7.
\textsuperscript{29} Pfeifenberger Direct at 13–15.
utility plans and state goals. Essentially, in the orange and red areas of the map, there is zero or negative capacity available for interconnecting new generation.

Thus, because of the flow constraints between MISO Midwest and MISO South, the Clean Energy Advocates request that the Commission find that MISO’s and the TOs’ proposal—revising MISO’s MVP tariff so that it is able to select MVP projects identified in subregional portfolios through its LRTP—is just and reasonable.

**Figure 1 – MISO Point of Interconnection Map**

3. **MISO’s and the TOs’ cost allocation proposal accommodates the unique characteristics of the MISO footprint in a manner that is consistent with the flexibility permitted by the Order No. 1000 Cost Allocation Principles**

    a. **The existing tariff prevents MISO from constructing needed regional MVP projects**

    As noted earlier, Clean Energy Advocates agree with MISO’s assertion that the LRTP portfolios could qualify as MVPs but for the existing “benefits [] spread broadly across the footprint” definitional requirement. Clean Energy Advocates believe that The Brattle Group’s analysis provides substantial evidence that the expected benefits from the LRTP portfolio for Tranches 1 and 2 would be broadly spread throughout MISO Midwest with only *de minimis*

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31 Tariff, Attach. FF § II.C.1.
benefits flowing to MISO South. That analysis coupled with the urgency demonstrated through MISO’s RIIA studies and the inability to interconnect in parts of MISO Midwest clearly demonstrates that MISO must revise its MVP cost allocation methodology so that it has the requisite cost recovery mechanism to build the transmission projects in Tranches 1 and 2 in the near term. This can allow MISO and its TOs to build the high-voltage transmission facilities needed to relieve the interconnection queue and to avoid the risk of operating an unstable grid.32

Otherwise, MISO will be prohibited from securing cost recovery for MVP projects that are otherwise eligible to be selected in the MTEP as the most efficient and cost-effective regional transmission solution. This outcome is contrary to the objectives of Order No. 1000. In Order No. 1000, the Commission sought to improve the transmission process because “inadequate transmission planning and cost allocation requirements may be impeding the development of beneficial transmission lines … all of which contributes to unnecessary congestion….”33

In addition, the Commission acknowledged a critical correlation: that the transmission grid must support the wholesale power markets to ensure that rates, terms and conditions for Commission-jurisdictional services remain just and reasonable.34 Thus, approving MISO’s Tariff revisions is necessary to ensure that rates for Commission-jurisdictional services in MISO’s service territory remain just and reasonable. As demonstrated by MISO’s RIIA, by as early as 2026, its rates for Commission-jurisdictional services could be considered unjust and unreasonable if it is not able to build the requisite transmission projects to expand its grid in the near term. Building transmission projects requires substantial lead-time; thus, MISO must proceed according the schedule identified in the LRTP for each tranche.

b. MISO’s and TOs’ cost allocation proposal complies with the cost allocation requirements of Order No. 1000

Order No. 1000 requires that MISO’s Tariff maintain a method or set of methods for allocating costs for new MTEP regional transmission facilities in a manner that is consistent with six specific cost allocation principles.35 Revised cost allocation methodologies must be filed in advance of proposing a new transmission facility whose costs will be allocated using this

32 We note that, while generators in the interconnection queue might be required to pay for network and interconnection upgrades, requiring these resources to pay for miles of high-speed transmission lines is unreasonable.
34 Order No. 1000 at P 85.
35 Id. at P 61.
methodology so that developers and stakeholders have notice of the prospective changes.\textsuperscript{36} The Commission acknowledged that in satisfying these cost allocation principles, each transmission planning region has unique characteristics, and, therefore, Order No. 1000 accords regions significant flexibility to tailor cost allocation processes to accommodate regional differences.

As discussed in Mr. Pfeifenberger’s testimony, the North/South constraint—which includes a contract flow restriction—constrains the flow of electricity between MISO’s subregions.\textsuperscript{37} This limitation was not in place at the time the MVP tariff provisions were approved in 2010, and the North/South constraint has been subject to substantial litigation, resulting in a settlement agreement that the parties are in the process of renegotiating. Clean Energy Advocates believe that in the interim, and as long as the North/South constraint remains in place, revising MISO’s MVP Tariff to account for the constraint is just and reasonable, especially given the urgency of bolstering the regional grid in MISO Midwest. The LRTP, RIIA, and Figure 1 all reinforce the priority order in which MISO must implement transmission portfolios to enable the rapid changes in the generation mix and to ensure the future stability of the grid, making the 2022/2023 portfolios for MISO Midwest (Tranches 1 and 2) the most time-sensitive, followed by the portfolio for MISO South, and then for the North/South transmission constraint.

In sum, Clean Energy Advocates urge the Commission to consider that MISO is dealing with three realities: (1) MISO urgently needs to bolster the regional reliability of the grid in the face of the generation-portfolio transformation; (2) MISO’s region is constricted by transmission constraints that will take time to eliminate; and (3) MISO’s existing Tariff does not allow for regional transmission costs to be allocated on a subregional basis for portfolios designed to bolster subregional and regional reliability, provide congestion relief, and implement public policy goals. With these three factors in mind, the Clean Energy Advocates urge the Commission to approve MISO’s proposed Tariff revisions. While the Clean Energy Advocates believe that resolving the North/South transmission constraint should be a priority, given the lengthy litigation history over the transfer capacity of the North/South constraint and the time

\textsuperscript{36} Id. at PP 555, 560.

\textsuperscript{37} Pfeifenberger Direct at 16:1–17.
sensitivity of Tranches 1 and 2, proceeding with MISO’s and the TOs’ proposal in the interim is prudent.\textsuperscript{38}

Finally, we note that the Commission has allowed other regional transmission planning entities to modify their cost allocation methodologies to reflect the unique characteristic of their service territory. In PJM Interconnection, LLC’s (“PJM”) Order No. 1000 compliance filing, it proposed, and the Commission approved, a combination of two methods for allocating costs for high-voltage transmission facilities built to improve grid reliability: 1) Postage-stamp method and 2) Solution-Based DFAX method, which uses a power flow analysis to assign costs relative to the use of the new facility as measured by the amount of power flowing over the new facility to each transmission zone.\textsuperscript{39} Following a complaint that the Solution-Based DFAX component of PJM’s methodology failed to assign costs to certain transmission zones in a manner that was consistent with Cost Allocation Principle 1,\textsuperscript{40} PJM acknowledged the flaw and drafted a whitepaper proposing alternatives, one of which the Commission approved.\textsuperscript{41} Similarly, Clean Energy Advocates respectfully request that the Commission approve MISO’s proposal so that MISO can move forward with constructing needed transmission facilities in a manner that is consistent with the Cost Allocation Principles of Order No. 1000.

4. The Commission should reject protests concerning the following issues

a. Whether the postage stamp method is unjust and unreasonable

Throughout the stakeholder process, some parties have argued that using a postage stamp approach does not allocate costs to beneficiaries with the granularity needed to be just and reasonable. However, MISO’s existing MVP Tariff uses a postage stamp cost allocation approach, which has been approved by the Commission and, subsequently, upheld by the United States Court of Appeals for the Seventh Circuit.\textsuperscript{42}

\textsuperscript{38} We also note that MISO commits to revising the cost allocation for the projects that proceed its resolution of the transmission constraint to ensure that the costs are allocated in a manner that is roughly commensurate with the benefits that flow to each respective subregion. Johnson Direct at 16–17.

\textsuperscript{39} \textit{PJM Interconnection, LLC}, 142 FERC ¶ 61,214, at PP 411–12 (Mar. 22, 2013), \textit{order on reh’g & compliance}, 147 FERC ¶ 61,128 (May 15, 2014).


In general, courts have held that transmission costs must be allocated in a way that reflects the costs actually caused by each customer who pays.\textsuperscript{43} Courts evaluate compliance with this cost causation principle by “comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party.”\textsuperscript{44}

In 2013, the Seventh Circuit Court of Appeals carefully considered MISO’s MVP cost allocation methodology and FERC’s approval thereof. The Court held, first, that in light of MISO’s qualification criteria for MVP projects, “MISO’s and FERC’s attempt to match the costs and the benefits of the MVP program … will … suffice.”\textsuperscript{45} The Court stated that a postage-stamp charge is legally acceptable when a granular geographic identification of benefits is difficult to establish: “[if the Commission] cannot quantity the benefits … but it has an articulable and plausible reason to believe that the benefits are at least roughly commensurate with those utilities’ share of total electricity sales in [the] region, then fine; the Commission can approve [an RTO’s postage-stamp-based cost allocation] on that basis.”\textsuperscript{46,47} The D.C. Circuit upheld regional cost-sharing as just and reasonable a few years later in a PJM case, holding that PJM and the Commission’s “categorical refusal to permit any regional cost sharing for an important category of projects conceded to produce significant regional benefits [could not] be reconciled” with the cost causation principle.\textsuperscript{48}

MISO’s triennial reviews have reevaluated the benefits of the original MVP portfolio of projects since those projects were approved. Reflecting on the results of the triennial reviews, The Brattle Group’s study shows that the estimates of benefits and beneficiaries do change over time. In figure 5 of Mr. Pfeifenberger’s testimony, the data shows that while the estimated MVP net benefit ratio for some Local Resource Zones (“Zones”) have increased over time, the benefits to others have decreased.\textsuperscript{49} Mr. Pfeifenberger notes in his testimony that “[g]iven these

\textsuperscript{43} ICC II, 721 F.3d at 770 (citing \textit{K N Energy, Inc. v. FERC}, 968 F.2d 1295, 1300 (D.C. Cir. 1992)).
\textsuperscript{44} Id. at 771 (citing \textit{Midwest ISO Transmission Owners v. FERC}, 373 F.3d 1361, 1368 (D.C. Cir. 2004)).
\textsuperscript{45} Id. at 775.
\textsuperscript{46} \textit{Id.} (citing \textit{ICC v. FERC}, 576 F.3d 470, 477 (7th Cir. 2009) (“ICC I’)).
\textsuperscript{47} The Seventh Circuit reversed the Commission’s approval of a postage-stamp cost allocation methodology in another opinion the following year, this time involving PJM. \textit{ICC v. FERC}, 756 F.3d 556 (7th Cir. 2014) (“ICC III’)). However, the Court distinguished the 2014 decision from the 2013 identically-captioned ICC II opinion involving MISO, on the basis that in ICC II, “[t]here was evidence that the [transmission] lines would not yield highly disparate benefits to the utilities asked to contribute to their costs. Indeed, the Commission had determined that the benefits from the new lines would be spread almost evenly across all the utilities. It made no such determination in the present [PJM] case[.]” \textit{Id.} at 562 (internal citations omitted).
\textsuperscript{49} Pfeifenberger Direct at 13, Fig. 5.
variances across the individual triennial analyses and their scenarios, it would not be practical to make cost allocations precisely based on any single estimate of transmission-related benefits.” 50

We can see from the temporal changes in these estimates that had MISO and the Commission assigned costs to the Zones based on this granular analysis at the time the MVP projects were approved, the costs would not have been assigned with an accuracy that reflects the level of benefits those Zones actually received over time. In fact, given the narrow set of benefit metrics used, the full amount of financial benefits received from the original MVPs has certainly been under-estimated. Yet in all cases, every MISO Zone (within the Midwest subregion, where the original MVP portfolio was built) has been estimated to receive more benefits than costs, and no Zone is receiving orders of magnitude more benefits than the others. And the beneficiaries of the original MVPs will continue to change as long as those lines are in operation. The Commission and appellate precedent require that costs must be assigned roughly commensurate with benefits, and these evaluations show that a postage stamp approach to cost assignment meets that requirement.

Further, the tools we have today to analyze benefits and beneficiaries do not cover the full range of benefits that are likely to accrue when new network transmission elements are added to the grid. Adjusted production costs (“APC”) benefits are a well-accepted standard in the industry, and methodologies for estimating these benefits are well understood. Yet, results of APC benefits are dependent on a range of study assumptions as well as the topology of the grid, which changes over time with additions of new transmission elements and both new and retiring generators. MISO has developed methods of estimating other benefits, but these methods do not cover the full range of recognized and expected benefits.

Specifically, the LRTP study underway at MISO today is driven largely by the regional reliability issues identified through the RIIA study, yet there is not an established methodology to estimate the full value of new transmission in support of regional reliability or resilience. This leads to the conclusion that while it is possible to estimate some benefits and beneficiaries, these estimates are not more accurate than a postage stamp approach for lines primarily intended to bolster regional reliability. Indeed, when dealing with regional reliability lines, a more granular approach based on a narrow set of benefit metrics would result in free-ridership, which is contrary to the requirements under Order 1000.

50 Id.
b. **Whether the portfolio approach is unjust and unreasonable**

The proposed cost allocation methodology, like the existing MVP tariff that is being modified, employs a portfolio requirement for new projects. This involves planning, evaluation, and approval of multiple transmission projects in a particular region that provide benefits that are “spread broadly” across the region.\(^{51}\) Opponents of this methodology may argue that a portfolio requirement is unjust and unreasonable because each project has its own benefit, cost, and risk profile, and should therefore be evaluated by MISO individually for approval. This argument lacks merit for three reasons.

First, evaluating projects individually, when they are designed together to address regional concerns, fails to account for substantial benefits of a portfolio of synergistic transmission projects. Second, MISO’s current MVP tariff, which includes a portfolio requirement, was approved by the Commission and has withstood appellate review. Third, the benefits from the last MVP portfolio of projects are substantial and spread broadly across MISO’s footprint, highlighting the actual value of portfolio-based transmission planning. Each reason will be discussed in turn.

The LRTP is one component of MISO’s Reliability Imperative,\(^{52}\) designed to address the reliability impacts of increasing levels of renewable energy in the MISO footprint. The LRTP process involves identifying the region’s long-range transmission needs and developing projects to ensure regional reliability. As such, while individual LRTP projects may have a variety of different types of benefits—economic, reliability, public policy—they are planned together to address those multiple needs. The value they provide to the system as a portfolio, accordingly, is greater than the value of each project evaluated in isolation. While a portfolio might increase capacity and reduce congestion throughout the region, one project by itself may simply move congestion from one location to another, providing minimal regional benefits. Evaluating projects as a portfolio that are planned together and will be approved together captures these interactive effects in any benefit analysis.\(^{53}\) Failure to do so, by planning each project in isolation, leaves quantifiable benefits on the table, results in a less efficiently planned

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\(^{51}\) See Tariff, Attach. FF § II.C.1 (“A Multi-Value Project must be evaluated as part of a Portfolio of projects, as designated in the transmission expansion planning process, whose benefits are spread broadly across the footprint.”).


transmission system at greater cost to consumers, and is inconsistent with the mission of LRTP to promote regional reliability.

The second, and most obvious, reason the portfolio requirement is just and reasonable, is that the current MVP Tariff contains this requirement as approved by the Commission, and such approval was affirmed by the Seventh Circuit on appeal.54 Nothing has occurred between the Commission’s Order on Rehearing in 2011 approving of the portfolio planning and cost allocation process and today that should cause it to reconsider this determination.

On rehearing in the underlying Commission proceeding in the approval of the MVP planning and cost allocation tariff, some MVP opponents argued that the portfolio approach produced unjust and unreasonable rates, because it would result in overbuilding the portfolio in order to ensure benefits from the portfolio are spread broadly throughout the footprint.55 Other parties contended that evaluating projects as a portfolio inappropriately eliminated the requirement to ensure that each individual project provided sufficient benefits to be included in the portfolio.56 Others argued that each project should be evaluated on its own merits to prevent unnecessary projects “holding hostage” necessary projects.57 The Commission dismissed these contentions and determined that the portfolio approach would ensure that projects are developed throughout the entire footprint.58 This determination was upheld on appeal.59 There is no reason for the Commission to reconsider this determination here.

Finally, when considering whether the portfolio approach results in just and reasonable rates, it is proper to focus on the analysis of the original MVP portfolio, which shows that it produced substantial benefits spread broadly throughout the region. The MVP Portfolio in MTEP11 included 17 projects, costing $5.2 billion (in 2011 dollars), involving more than 2,000 miles of high voltage transmission lines. The portfolio was designed to facilitate the integration of approximately 25.5 gigawatts of new wind generation to meet renewable energy mandates and goals in the MISO footprint.60 All but one of these projects are in service now and, according to the last full triennial review, providing a benefit-to-cost ratio between 2.2 to 3.4. Of particular

54 MISO, 133 FERC ¶ 61,221, order on reh’g, 137 FERC ¶ 61,074, aff’d sub nom; ICC II.
55 MISO, 137 FERC ¶ 61,074, at P 54.
56 Id. at P 59.
57 Id. at P 61.
58 Id. at P 171.
59 ICC II, 721 F.3d at 781.
importance is that MISO’s periodic analyses of the portfolio shows that significant net benefits are accruing across every zone over which costs were apportioned. The fact that these benefits are widely spread across the region is consistent with the “regional nature of RTOs . . . to provide increased efficiencies and benefits that are unachievable except through regionally coordinated operation.” In addition, a stable and even distribution of benefits is part and parcel of a portfolio planning and cost allocation process.

Finally, the requirement to broadly spread benefits is mandated by the Order No. 1000 regional Cost Allocation Principle 1 (reflecting the doctrine of ICC I) that requires costs to be allocated in a manner “that is at least roughly commensurate with the estimated benefits of [the] facilities . . . .”

### c. Whether The Brattle Group Analysis Supports MISO’s Proposal

The testimony of The Brattle Group consultant Johannes Pfeifenberger supports the proposed MISO tariff changes by showing that allocation of costs of a future MVP portfolio on a subregional basis (either to MISO Midwest, or to MISO South) is appropriate given that significant benefits are not expected to flow to the other subregion in some cases. Therefore, any such portfolio would not meet the requirements of the footprint-wide cost allocation standard in MISO’s current MVP tariff. Mr. Pfeifenberger looked at the flow of economic and reliability benefits from MISO’s existing MVP portfolio of 17 projects approved in 2011 in the MISO Midwest subregion that are now in large part built, as well as hypothetical new portfolios of projects in MISO Midwest and in MISO South that increase bulk transmission capacity by ten percent. Both analyses were used as proxies to evaluate the potential benefits of a future project portfolio in one subregion flowing to the other subregion, given that there is not yet an actual new portfolio of MVP (or MVP-like) transmission projects to analyze. While the analyses in the hypothetical portfolios referenced here consider only APC benefits, APC was shown under

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62 MISO, 137 FERC ¶ 61,074, at P 130.
63 See ACEG Report at 62 (“[b]enefits of a portfolio of projects will tend to be more stable and distributed more evenly”) (citing Johannes Pfeifenberger, Improving Transmission Planning: Benefits, Risks, and Cost Allocation, at 28 (Nov. 6, 2019)).
64 Order No. 1000, 76 Fed. Reg. 49,842, 49,932 (Aug. 11, 2011). The D.C. Circuit Court of Appeals later held that FERC had “well[] understood [] the deficiencies in transmission planning and cost allocation practices” prior to issuing Order No. 1000 in 2011, and “the Commission’s determination [in Order No. 1000] that the current planning and cost allocation practices were unjust or unreasonable warrants substantial deference from this court.” S. Car. Pub. Serv. Auth., 762 F.3d at 65, 67 (internal quotations omitted).
MISO’s Triennial Reviews of the existing MVP portfolio to represent on average ninety-three percent of the benefits from these transmission additions.\textsuperscript{66}

Additionally, Mr. Pfeifenberger’s analysis shows that the transfer limits (as a percentage of the total installed capacity requirement) between MISO Midwest and MISO South are significantly smaller than the import limits between MISO’s Local Resource Zones.\textsuperscript{67} The Clean Energy Advocates generally agree with Mr. Pfeifenberger’s conclusion that “[t]he disproportionately small size of the Midwest-to-South subregional capacity transfer limit (compared to the capacity transfer capability between the zones of the individual Subregions) means that subregional transmission upgrades that increase capacity transfer limits between the Local Resource Zones of one Subregion will more readily be spread through each Subregion but must be expected to offer no or only disproportionately small capacity-related benefits to the other Subregion.”\textsuperscript{68} For this reason, the proposed tariff modification that would recognize a MVP portfolio having subregion-wide (but not MISO footprint-wide) broadly spread benefits, and allocate the costs of those projects on a postage stamp basis within the subregion, is just and reasonable within the “roughly commensurate” standard of Order No. 1000 and \textit{ICC I} through \textit{ICC III}.\textsuperscript{69}

The Brattle Group’s analysis does not have to show that the proposed MVP tariff changes are appropriate for the actual set of LRTP projects being evaluated by MISO today, but rather than the proposed new cost allocation methodology is presumptively reasonable to apply to a portfolio of MVP projects located in either subregion. The Brattle Group’s analysis shows that it is possible, and likely, that a portfolio of projects located in one of MISO’s subregions will provide the bulk of its benefits to that same subregion, given the limited transfer capability between MISO Midwest and MISO South. However, regardless of The Brattle Group’s analysis, MISO will need to justify that its proposed MVP cost allocation methodology meets the Seventh Circuit’s and the Commission’s “roughly commensurate” standard when applied to any MVP portfolio of projects. This type of justification will require MISO to analyze the benefits and

\textsuperscript{66} Id. at 12:1–4.
\textsuperscript{67} Id. at 22, Fig. 9.
\textsuperscript{68} Id. at 21:9–14.
\textsuperscript{69} Additionally, in another case involving MISO outside the ICC trilogy, the Seventh Circuit held that where “FERC’s calculations suggest that the spillover of benefits to other zones is modest enough to make the local allocation of costs ‘roughly commensurate’ with the allocation of benefits,” local allocation of costs is appropriate. \textit{MISO Trans. Owners v. FERC}, 819 F.3d 329, 336 (7th Cir. 2016) (citing \textit{ICC I}, 576 F.3d at 476).
beneficiaries of the particular portfolio of projects, showing that any MVP portfolio must address “at least one economic-based Transmission Issue that provides economic value across multiple pricing zones” and “must generate total financially quantifiable benefits, including quantifiable reliability benefits, in excess of the total project costs.”

As indicated by the filing and testimonies, the amended Tariff’s allowance for subregional application of the MVP cost allocation methodology is expected to apply to Tranche 1 and Tranche 2 project portfolios, which are located solely in MISO Midwest. Mr. Pfeifenberger’s testimony and results indicate that MVP cost allocation can be appropriate for a set of projects located solely either in the MISO Midwest or MISO South subregions. However, once MISO completes its LRTP analysis of Tranche 1 or Tranche 2 portfolios, it will need to provide a benefits analysis that confirms that only de minimis benefits are estimated to flow to MISO South in order to apply this subregional cost allocation methodology to those portfolios of projects.

d. **Whether a subregion that does not receive broad benefits from an MVP project is a freerider**

   i. **Whether MISO’s process for determining whether MVP costs are roughly commensurate with the ratepayer benefits is sufficient**

MISO is not seeking to change the process that it used to allocate costs for the MTEP11 MVP projects, rather it is applying the same analysis but at a subregional level in the event that an MVP portfolio does not provide broad regional benefits across the full MISO footprint. According to Mr. Pfeifenberger’s analysis, any leakage of benefits between the respective subregions is likely to be insubstantial and de minimis.

The Commission has declined to create a fixed definition of de minimis that covers every application of cost allocation methodologies so that it can retain the ability to weigh the qualitative measures related to the subject matter for which a particular cost allocation regime is designed, on a case-by-case basis. Moreover, the standard used by courts to determine whether a cost allocation methodology is unjust, unreasonable, or unduly discriminatory or preferential is the cost causation principle, which requires “that all approved rates reflect to some degree the

70 Tariff, Attach. FF, §§ II.C.2.c, II.C.7.
71 Id. § II.C.1 (proposed) (“benefits of the Portfolio are not spread broadly across the MISO system-wide footprint, [but] are spread broadly across: (a) the MISO Midwest MVP Cost Allocation Subregion; or (b) the MISO South MVP Cost Allocation Subregion”).
72 Pfeifenberger Direct at 9–10, 19.
costs actually caused by the customers who must pay them.”

This standard permits a wide degree of estimation and requires a showing that the Commission’s decision approving the allocation methodology is not arbitrary or capricious in light of the burdens or benefits imposed or received.

In the ICC line of cases, the court’s decisions rested in large part on whether the Commission or the relevant RTO supplied substantial evidence to demonstrate reliance on comprehensive analysis that supports the relevant cost allocation methodology. Unlike the cost allocation issues present in ICC I and ICC III,75 in the instant case MISO has supplied substantial evidence to support its filing. With the help of Mr. Pfeifenberger’s testimony, MISO articulated a rational connection between the facts surrounding the limited transfer capability between its two subregions and the choice to revise its MVP cost allocation methodology. Therefore, the Commission’s approval of the instant application would survive judicial scrutiny under the arbitrary or capricious standard of review.76

e. Whether MISO’s plan to file a different cost allocation method for the MISO South LRTP portfolio makes its instant filing inconsistent with Cost Allocation Principle 6

Cost Allocation Principle 6 provides that the cost allocation methodology for a given category of projects must be applied consistently. In this filing, MISO has committed “to continuing the stakeholder process dedicated to identifying a cost allocation approach” that may use a more granular approach for identifying benefits of LRTP projects.77 Clean Energy Advocates argue that this issue is outside the scope of this proceeding. If in a subsequent filing MISO requests approval to add another cost allocation method or to modify the then-effective methodology, it will need to demonstrate that its proposal is consistent with Cost Allocation Principle 6 at that

73 Midwest ISO Transmission Owners, Inc. v. FERC, 373 F. 3d 1361, 1368 (D.C. Cir. 2004).
74 Id. at 1369.
75 ICC I, 576 F.3d at 477 (“Rather desperately FERC's lawyer . . . reminded us at argument that the Commission has a great deal of experience with issues of reliability and network needs, and they asked us therefore (in effect) to take the soundness of its decision on faith. But we cannot do that because we are not authorized to uphold a regulatory decision that is not supported by substantial evidence on the record as a whole, or to supply reasons for the decision that did not occur to the regulators . . . .”); ICC III, 756 F.3d at 561 (“Our concern is with the absence from the Commission's orders of even an attempt at empirical justification.”).
76 ICC I, 576 F.3d at 478 (“we require only that the agency have made a reasoned decision based upon substantial evidence in the record. But the Commission failed to do that, and so the case must be remanded for further proceedings; we intimate no view on their outcome.”) (citing Town of Norwood v. FERC, 962 F.2d 20, 22 (D.C.Cir.1992)) (internal citations omitted).
77 Transmittal Letter at 29.
time. Moreover, such change would be prospective in nature, and it is entirely possible that MISO may choose to add a new project-type that uses a different cost allocation methodology while keeping the MVP cost allocation methodology in place. All that matters for the purpose of this proceeding is that MISO applies its proposed cost allocation methodology to all project types that meet the defined criteria in the tariff for subregional MVP projects.

f. **Whether the “Generator Pays” issue is outside the scope of this proceeding**

Some stakeholders at both OMS’s CAPCOM and the RECBWG claimed that any cost allocation for LRTP projects should include a component allocating some of the costs to the interconnecting generators. First, under existing tariffs, generators already pay for all costs of required network upgrades that are identified in the generation interconnection queue process, except when the upgrade is 345V or higher, in which case load pays 10 percent. This includes all costs for tie lines that connect the generator to the bulk electric system, plus any additional required network upgrades prompted by the projects within a specific generator-interconnection cohort to address reliability issues. The fact that load receives benefits from the network upgrades that generators fund was the balance struck when generators were not required to pay for MVPs. Any charge to generators for MVPs would require the requisite modification to that original compromise to ensure that an appropriate balance of cost distribution is maintained.

Second, stakeholders calling for generators contributing towards LRTP portfolios have often argued that the generators are causing the need for the LRTP lines and as cost causers must pay. While the Commission found in Order No. 1000 that to the extent a party benefits from new transmission facilities it may be said to be a cost causer, the Commission has also determined that cost causers do not have to be charged in all cases. Four years after *ICC I*, the court then squarely considered whether the Commission had erred in determining that MISO MVP cost allocation entirely to wholesale consumers (and not to generators) was a just and reasonable methodology. The court upheld the Commission’s determination, noting that “the utilities benefit from cheaper power generated by efficiently sited wind farms whose development the multi-value projects will stimulate.”

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78 See, e.g., MISO Tariff, Attach. X, §§ 7.3.1.4, 7.3.1.4.1, 7.3.2.4.1, 7.7; id. at Attach. FF § III.A.2.d.
79 *ICC I*, 576 F.3d at 476.
80 *ICC II*, 721 F.3d at 778.
In the case of the original MVP portfolio, generators were not charged, though there was no claim that they did not benefit from those lines. Instead, a compromise was struck, and the cost allocation for generator interconnection that required upgrades was also changed such that generators now pay 100 percent of the costs of these network upgrades except in the case that they are 345kV or above, in which case generators still pay 90 percent of the costs.81 Prior to that time, generators paid 50 percent of the costs of interconnection required network upgrades, and load paid the other 50 percent.82 At that time, this was a simple approach to strike a balance of cost allocation when all are likely to benefit from both kinds of lines, yet the analysis of benefits and beneficiaries is limited and changes over time.

Certain critics of MISO’s proposed approach have also claimed that interconnecting generators need to receive price signals to ensure they are interconnecting at the most cost-effective locations. However, this justification is inappropriate to the goals of the LRTP, which are to bolster the regional grid, i.e., to build a new legacy system. Once the LRTP lines are built, they become the legacy system and generators can interconnect to them with the price signals sent through the normal generator interconnection process.

Finally, the LRTP is decidedly not a generation outlet study. The original study that led to the first MVP portfolio in 2011 was a generator outlet study, as it identified renewable energy zones (based largely on state-level renewable energy requirements) and proposed new transmission lines to ensure that electricity could be reliably conveyed from those zones to load. At that time, MISO considered a cost-allocation approach that included a generator pays component, but it was rejected in favor of a postage stamp.83 In contrast, the LRTP study, while preparing for the interconnection of many new generators and the retirement of others, is focused primarily on maintaining regional reliability in the face of that change and being able to dispatch generators based on evolving load shapes. MISO has indicated that the LRTP process is not seeking to address transmission issues resulting from specific generator locations.84

82 The 90 percent / 100 percent policy was first approved by the Commission as an “interim” approach in MISO and The Midwest ISO Transmission Owners, Order Conditionally Accepting Tariff Amendment and Directing Compliance Filing, 129 FERC ¶ 61,060, at PP 8, 49 (Oct. 23, 2009), and then made permanent in the Commission’s Order approving the MVP category, MISO, 133 FERC ¶ 61,221, at PP 50, 332.
5. **Conclusion**

For the reasons discussed herein, the Clean Energy Advocates respectfully recommend that the Commission approve the proposed Tariff amendments filed by MISO and the TOs as just and reasonable. The Tariff amendments will enable MISO to approve vital new transmission projects to help foster a clean energy transition with appropriate cost allocation rules that will satisfy the required principles of cost causation. The Clean Energy Advocates thank the Commission for carefully considering these comments.

Dated: March 7, 2022. Respectfully submitted,

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APPENDIX 1

MISO’s Stakeholder Process Related to the Development of the Revised MVP
Tariff Proposal
RECBWG Stakeholder Meetings Discussing LRTP Cost Allocation Methodology

<table>
<thead>
<tr>
<th>Meeting Date</th>
<th>Topic Discussed</th>
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<tbody>
<tr>
<td>2/11/21</td>
<td>Overview of LRTP emphasizing the critical need and drivers for these regional projects to adapt to the changing energy mix, to preserve the reliability, efficiency, and affordability of the MISO wholesale market.¹</td>
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<tr>
<td>2/22/21</td>
<td>Workshop providing an overview of applicable transmission cost allocation approaches in the existing approved MISO Tariff.²</td>
</tr>
<tr>
<td>3/18/21</td>
<td>Stakeholder discussion of management plan for RECBWG in developing LRTP cost allocation methodology. Coordination of MISO’s PAC and RECBWG on LRTP process, and intent behind LRTP Workshops to present reliability criteria driving projects.³</td>
</tr>
<tr>
<td>4/28/21</td>
<td>MISO staff provided comments related to discussions reviewing existing approved cost allocation methodologies. Presentation and discussion of framework for proposed cost allocation on behalf of TOs, comprised of a subgroup of MISO transmission operators.⁴ Stakeholders discussed furthering the objectives, drivers for LRTP, and cost distribution approaches related to reliability and a possible assessment of economic metrics related to reliability benefits.⁵ Written feedback was solicited from stakeholders.⁶</td>
</tr>
<tr>
<td>5/27/21</td>
<td>Stakeholders reviewed comments solicited at the 4/28/21 meeting and discussed the varying perspectives on cost allocation methodologies appropriate to the LRTP project type. A consensus formed among some stakeholders around a need for the assessment and further discussion of what constitutes system-wide reliability, how to quantify the benefit of transferring power over long distances, what benefits can be assigned to reliability, how to</td>
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⁴ This group of ‘Certain TOs’ consisted of the MISO members Ameren, ITC, MidAmerican, Xcel Energy/Northern States Power Co, GRE, and Otter Tail at the time of this proposal.
allocate costs, and how to capture the benefit of avoided future transmission investment.\(^7\)

**6/11/21** Special meeting to discuss reliability drivers for the LRTP project type and specifically the region-wide reliability needs that LRTP projects are intended to address. The presented needs were related to adding regional flexibility to the bulk power system projected to have significantly higher penetration of renewable energy and the changing grid stress patterns that have a critical impact on reliable delivery of power to load. Transmission Owner stakeholder member LS Power Development, LLC on quantifying transfer capability of LRTP project type also presented.\(^8\)

**6/24/21** In response to stakeholder input related to cost allocation to generators for LRTP projects, MISO staff presented a review of cost allocation discussions extending to the period prior to the MVP projects, providing insight as to why this approach was not appropriate for the MVP projects and why they may not be appropriate for the LRTP project type.\(^9\) Written feedback was solicited from stakeholders.\(^10\)

**7/15/21** MISO Staff provided an overview of stakeholder comments including two cost allocation proposals for LRTP projects from the Environmental Sector and the TOs group.\(^11\) The ensuing stakeholder discussion provided stakeholders an opportunity to clarify questions on the proposals related to criteria for projects, voltage threshold of projects, benefits related to projects, and other cost allocation components.\(^12\)

**7/28/21** MISO staff presented an initial cost allocation proposal and received questions related to this proposal. MISO suggested the existing MVP cost

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<tr>
<td>8/12/21</td>
<td>MISO staff provided a review of solicited comments on the LRTP cost allocation proposal presented at the 7/28/21 meeting and provided a review of the ‘MISO South Proposal’ from regulatory staff and transmission owners from the MISO South Subregion utilizing many elements of the MEP project type. Consensus broadly agrees that one cost allocation should be applied to the entire MISO footprint, but there is contention over the adoption of an MVP, MEP or other framework for a footprint wide LRTP project cost allocation.</td>
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<tr>
<td>9/23/21</td>
<td>MISO staff presented an updated cost allocation proposal and presented their concerns over the adoption of the ‘MISO South Proposal’. Namely that the benefits quantified in the narrower economic analysis in the proposal would not account for the reliability components of LRTP project types. Contention still remained amongst some stakeholders around MISO’s approach, while other stakeholders approved of the revised MISO’s cost allocation approach for the LRTP project type. MISO staff expressed concern over utilizing two separate cost allocation approaches for the same LRTP project type and proposed an alternative, to apply the MVP postage stamp methodology on a subregional basis, with two subregions, MISO North, and MISO South.</td>
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<tr>
<td>10/14/21</td>
<td>MISO President Clair Moeller presented MISO’s LRTP cost allocation proposal and answered questions from stakeholders. The proposal recommended a bifurcated approach to the LRTP cost allocation proposal and to modify the existing MVP tariff. The constraint between the subregions was</td>
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<tr>
<td>11/11/21</td>
<td>MISO Staff reviewed stakeholder concerns regarding subregional postage stamp cost allocation, the need for further discussion on a distinct cost allocation for LRTP projects, inclusion of ‘guardrails’ or ‘triggers’ in MISO’s Business Practice Manual (“BPM”) that were discussed in the 10/14/21 meeting, the tariff revision to be presented to FERC, and MISO’s response to a potential rejection of the FERC filing of the revised MVP tariff proposal. MISO Staff also presented on the specific revisions required in the existing approved MVP Tariff in the MISO BPM. MISO Legal also briefed stakeholders on commitments and protections for stakeholders and their interests, including a commitment to pursue the development of a footprint wide LRTP cost allocation proposal.</td>
</tr>
<tr>
<td>12/3/21</td>
<td>MISO staff provided an overview of the scope and methodology of The Brattle Group’s analysis for the revised MVP tariff proposal, which provided insight into the spread of benefits within MISO, and whether the North/South constraint leads to a regional or subregional allocation of benefits.</td>
</tr>
<tr>
<td>1/24/21</td>
<td>MISO staff provided an update on progress in the Revised MVP Tariff filing to FERC and provided redlines of the updated tariff language to stakeholders. MISO also shared the methodology for how projects will be selected for the application of this tariff. Staff also mentioned that this filing would be a joint filing with a majority of MISO transmission owners. Additionally, a presentation of The Brattle Group analysis by Johannes Pfeiffenberger was made, which supported the allocation of benefits spread broadly throughout subregions but not throughout the entirety of MISO.</td>
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### PAC Stakeholder Meetings Discussing LRTP Process

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<th>Meeting Date</th>
<th>Topic Discussed</th>
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<tr>
<td>8/12/20</td>
<td>MISO staff, in their ‘Planning Advisory Committee Long Range Transmission Planning – Preparing for the Evolving Future Grid’ presentation, provided a broad overview of the projected challenges in MISO’s footprint, which require a regional reliability project type that addresses long term planning issues throughout the region. The drivers presented for the transformation of the MISO resource fleet extend from a shift in member resource plans to legally binding public policy goals.(^{21})</td>
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<tr>
<td>10/14/20</td>
<td>MISO staff presented an overview of their technical study process including the data assumptions and prior MISO analysis informing the LRTP process and provided an initial timeline for the development of LRTP solutions and cost allocation.(^{22})</td>
</tr>
<tr>
<td>1/13/21</td>
<td>MISO staff presented a technical study update for the purpose of informing stakeholders of the process and timeline of developing reliability models, economic models informing their MTEP and LRTP project selections, in addition to LRTP specific models for reliability and economic analysis.</td>
</tr>
<tr>
<td>3/17/21</td>
<td>MISO staff presented a technical study update with a work plan and timeline of the needed reliability, economic and business case analysis as well as stakeholder processes needed to qualify LRTP solutions from March through December 2021. Additionally, MISO presented a footprint-wide ‘indicative map’ of LRTP projects that were anticipated by MISO staff to resolve challenges presented in the initial August 12th 2020 PAC meeting. It was reiterated that these solutions were a response to issues identified in relation to the changing resource mix in the MTEP Futures, which were informed by robust stakeholder input and provide a bookended forecast of lower and higher fleet transition to renewable energy resources that require grid upgrades to maintain reliability and affordability. It was presented to stakeholders that the degree of change throughout the entirety of the MISO footprint, and the associated level of both public policy and corporate goals are driving this shift.</td>
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### LRTP Stakeholder Workshops Held

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<th>Meeting Date</th>
<th>Topic Discussed</th>
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<tbody>
<tr>
<td>4/30/21</td>
<td>MISO staff presented an overview of the approach to LRTP planning, the drivers for projects, and the type of transmission assets qualifying for LRTP. Additionally, staff fielded questions from stakeholders about this presentation and a technical update of the schedule for modeling the MISO power system to account for a rigorous analysis of system needs to be identified for LRTP upgrades.23</td>
</tr>
<tr>
<td>6/25/21</td>
<td>MISO staff explained their process for the ‘reliability modeling’ analysis of system risks with a higher penetration of renewable energy resources.24</td>
</tr>
<tr>
<td>7/30/21</td>
<td>MISO staff presented initial results of the ‘reliability modeling’ analysis described in the 6/25/21 workshop. Specifically, thermal and voltage issues on the system that show a necessity for regional reliability projects. MISO staff provided an update of the LRTP technical planning process.25</td>
</tr>
<tr>
<td>8/27/21</td>
<td>MISO staff presented additional analysis of reliability issues at 10 and 20 years under the Future 1 scenario, analyzing the proposed ‘indicative’ LRTP solutions provided at the March 17th PAC meeting. Issues related to transfer capacity were a main focus of this presentation, and the need for a more connected system to adapt to a higher penetration of renewable energy in MISO’s system was stressed with supportive slides. Additionally, MISO presented on the submission process for alternative LRTP solutions.26</td>
</tr>
<tr>
<td>9/24/21</td>
<td>MISO staff presented a scope for their economic analysis of LRTP solutions and an update of the technical study status and reliability analysis results with support for the methodology of the reliability analysis.27</td>
</tr>
<tr>
<td>10/19/21</td>
<td>MISO staff presented reliability and economic analysis updates and introduced the scope for the business case analysis for LRTP projects. Additionally, MISO staff presented on the comparative costs of local versus regional resource development throughout the MISO footprint, showing the</td>
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<tr>
<td>11/19/21</td>
<td>MISO staff presented an update of their business case analysis, including proposed benefit metrics to be included in this analysis. Possible metrics included avoided production cost savings, avoided investment in local generation, avoided risk of load shedding, and avoided resource adequacy requirements. MISO staff also indicated their openness to other benefit metrics that may be quantifiable.</td>
</tr>
<tr>
<td>1/21/22</td>
<td>MISO staff presented initial LRTP solutions that qualified their ability to resolve reliability issues and presented on the ability of alternative stakeholder solutions submitted to resolve these issues. MISO staff also presented on the possible considerations related to selecting LRTP projects regarding reliability issues, congestion relief, operational flexibility, cost effectiveness, congestion shifts after project implementation, and overall inclusion into LRTP project roadmap. Additionally, MISO staff presented on potential benefit metrics for LRTP project types, along with potential approaches to quantifying associated benefits within the presented categories.</td>
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CERTIFICATE OF SERVICE

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

Dated: March 7, 2022.

/s/ Gabriela Rojas-Luna
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