PJM/MISO IPSAC
Annual Issues Review – 3rd Party Issues and Feedback
February 5, 2025

The undersigned transmission advocates appreciate the opportunity to submit comments pursuant to the 2025 PJM-MISO IPSAC Annual Issues Review (AIR) process. These build on the comments submitted by 13 transmission advocacy organizations as part of last year's AIR process.

Growing evidence for interregional transmission between PJM and MISO

The evidence demonstrating the need for more robust interregional transmission between PJM and MISO has only grown since many of our organizations initially submitted comments on this issue in last year's AIR comment period. Over the past year, several new studies have further underscored the need for increased interregional transfers between the PJM and MISO systems. These latest studies, as well as the many we cited in our prior AIR comments, emphasize the value and necessity of interregional transmission from reliability, economic, and public policy perspectives. These include:

- PJM's latest report in its energy transition study series, *Energy Transition in PJM: Flexibility for the Future*, released in June 2024, concluded that "interregional transfer capability is increasingly important." It identified that PJM and MISO have largely complementary renewable energy generation profiles. This highlights how interregional transfers may be a least-cost and low-emissions way to ensure reliability within the two RTOs. Furthermore, the report notes that "as the resource mix changes more substantially… interface limits are reached more often." For instance, between the study's Base and Accelerated scenarios, total interchange between PJM and its neighbors increases 35%. This underscores the need for **proactive interregional planning** to expand interface limits and utilization rates.

  In the report, PJM staff identified three recommendations to enhance interregional transfers between PJM and its neighbors:

  1. Updating interregional planning to "better capture intermittent resource behavior" and "review methods for defining tie limits,"
  2. Updating JOAs (Joint Operating Agreements) and creating them with neighbors where they do not already exist, and
  3. Working with neighbors to better adapt to and manage large interchange swings, including "enhanced optimization approaches."

- The North American Electric Reliability Corporation (NERC) issued its final *Interregional Transfer Capability Study* in November 2024.

  The study recommended several prudent additions of transfer capability between PJM and its neighbors, including 1,000 MW between MISO-East and PJM-West, to bolster resilience during extreme weather events. The study also advises decision-makers to consider "existing or planned projects" for meeting the identified interregional transfer capacity needs.

- The U.S. Department of Energy's Grid Deployment Office (GDO), in partnership with the National Renewable Energy Laboratory (NREL) and the Pacific Northwest National Laboratory (PNNL), released the *National Transmission Planning Study* in the fall of 2024. This multiyear study included an explicit interregional focus and identified multiple benefits of expanding interregional transfer capacity, including enhanced reliability and resilience during extreme weather and significant cost savings for consumers nationwide.

  For the PJM and MISO seam, the study identifies up to 64 GW of High Opportunity Transmission (HOT) between the two regions.[1]

Sustained PJM and MISO state interest

Over the past year, there has also been sustained interest in interregional transmission from states across the PJM and MISO regions. In October 2024, the Organization of MISO States (OMS) and the Organization of PJM States, Inc. (OPSI) sent a joint letter to the two RTOs commending the RTOs' announcement of an informational interregional transfer capability study (ITCS). However, they also called on the RTOs for a greater commitment of resources and more comprehensive work, such as developing a joint model, evaluating an increased number of interfaces, and conducting interregional planning in alignment with Order 1920 requirements. We also appreciate and agree with the OMS/OPSI request for more robust stakeholder engagement and input on the ITCS.

Reforms beyond the informational ITCS needed

We commend the OPSI/OMS joint letter from October 2024 and want to both uplift and build on many of its points. Like the states, we recognize that the PJM-MISO informational ITCS is a commendable and historic effort but that it is only the *first* step toward more

[1] See Figure ES-11 in the study Executive Summary.

comprehensive interregional transmission planning. Importantly, **the ITCS alone is insufficient to address these two regions' interregional needs**. For instance, the ITCS does not allow for enhanced transfers of power beyond those generation resources that already have signed firm point-to-point transfer agreements. This prevents the two RTOs from taking advantage of the huge potential for cost savings from *greater* interregional transfers of power, especially during extreme events. As we explain below, more action needs to be taken by PJM and MISO to ensure that the regions are reaping the full benefits of existing and new interregional transmission.

Recommendations:

1. **Ensure the ITCS results in actionable infrastructure recommendations:**
    a. **Calculate and communicate costs AND benefits:** We agree with the OPSI/OMS recommendation that the RTOs communicate not only the costs of the infrastructure upgrades identified but also the benefits, such as energy savings and reduced line losses (the list of seven benefits under Order 1920-A should be a minimum starting point for benefits analysis).
    b. **Update cost allocation methodologies *in parallel* with study results:** If cost allocation methodologies need to be updated, we also recommend the RTOs begin updating these *in parallel* to finalizing study results to minimize any potential delays in approval and construction of identified solutions.
    c. **Make state participation roles and process clear and timely:** If states are required to take action, the RTOs should make it clear what action states are required to take and give states sufficient time for making such decisions, requesting additional information as needed.
    d. **Include existing and planned projects in regional and interregional studies:** As NERC observes, there are already projects underway (including Grain Belt Express and SOO Green) that would contribute to meeting the transfer capacity needs identified, and the RTOs should account for those developing projects in interregional planning base cases or sensitivity studies.

2. **Commit to undertaking a more long-term study effort following the conclusion of the ITCS:**
    a. **Initiate a longer-term, phase II, expanded study scope:** As OPSI and OMS described in their letter, the ITCS could be considered the first phase, with a second phase dedicated to a longer-term planning horizon that **expands the number of interfaces and total power exchanges** under evaluation beyond those generation resources with existing firm point-to-point transfer agreements to include stressed situations where non-firm imports are

needed. There is precedent for RTOs seeking exemptions to their normal interregional planning procedures to conduct more forward-looking, long-term interregional planning. For instance, SPP and MISO recently sought a JOA waiver from FERC to conduct a more comprehensive interregional study, which will utilize multiple scenarios and expand the benefit metric evaluation.

b. **Align study with all requirements under FERC's Order 1920-A**,
    i. Utilize a scenario-based planning approach to account for uncertain conditions,
    ii. Quantify all seven benefits listed in Order 1920-A, and
    iii. Incorporate all seven factors listed in Order 1920-A, including all relevant federal, state, and local public policies.
    iv. Consider utilizing modeling techniques such as capacity expansion modeling to better define and understand how the two RTOs can benefit from increased day-to-day sharing of generation resources.

c. Interregional studies may also identify **within-region transmission upgrades** that are needed to enable more interregional transfers.

3. **Consider improvements to utilizing existing interregional transfer capacity:**
    a. **Reform the PJM and MISO Coordinated Transaction Schedule (CTS) Agreement:** Earlier this year, in a report entitled *Barriers and Opportunities to Realize the System Value of Interregional Transmission*, NREL researchers found that, in 2022, PJM and MISO experienced uneconomic flows across its seam in 48% of hours of the year. This is, according to the report's authors, due to a lack of participation in the two RTOs' Coordinated Transaction Scheduling (CTS) agreement, which suffers from "high transaction fees and persistent price forecasting errors."
        i. **Update PJM and MISO's Firm Flow Entitlements (FFEs)**, many of which were set using 2004-era flows, as well as its interface pricing schemes (see pp. 27-29 of the NREL report).
        ii. **Reform the PJM and MISO CTS system to utilize an intertie optimization approach** instead to maximize efficiencies in transactions. As a Brattle analysis from 2023 found, intertie optimization for 1 GW of interregional transmission between PJM and MISO can provide up to $63 million in value annually for consumers by reducing time delays in trading. Up to 52% of the value of that 1 GW of transfer is lost from delays up to two hours in trading.
        iii. **Publish hourly real-time curtailment data**, ideally on a zonal level, across PJM and MISO to enable greater transparency into the potential for interregional transmission to lower costs for consumers.

Other RTOs (e.g., SPP, CAISO) publish hourly curtailment levels either systemwide or at a zonal level.

iv. **Improve Capacity Markets.** The existing transfer capacity between the regions is underrepresented in both regions' resource adequacy planning and markets. MISO and PJM should work to (1) harmonize ELCC models to quantify diversity benefits in their resource adequacy planning and (2) review and reduce market barriers for capacity transfers between regions (e.g., current pseudo-tie requirements).

There is significant room for improvement that PJM and MISO can make to their existing utilization of interregional transmission. Setting aside the need to expand transfers, major gains can be made by maximizing utilization of existing interregional transmission in a way that follows real-time market signals to the best extent possible.

In response to our letter, we would appreciate receiving answers to the following questions. We also request the opportunity to discuss these and the RTOs' preliminary responses at the Annual Issues Review meeting of the IPSAC on March 7, 2025.

1. How do PJM and MISO plan to make the results of their informational ITCS actionable in a way that can result in infrastructure build? How will MISO and PJM ensure that any changes to their tariffs and Joint Operating Agreements are in place to ensure action on the ITCS results will be timely?
2. How do PJM and MISO plan to leverage the informational ITCS effort to develop more comprehensive long-term interregional planning efforts between their footprints?
3. Given the significant demand for new generation resources across the PJM-MISO region and in particular along the seam (e.g., retirements and/or data center load growth in seams states such as Illinois and Indiana), what plans do the RTOs have to allow for more interregional power flows to maintain a reliable and affordable grid? How can pseudo-tie requirements be revisited and examined to reduce the burden on generators to share power across grid regions?
4. Given the findings in the NREL study, *Barriers and Opportunities to Realize the System Value of Interregional Transmission*, what plans do PJM and MISO have to improve utilization of existing interregional transmission, including the potential for intertie optimization and publication of hourly curtailment data?

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