

1. What do you believe to be the single most important/impactful seams issue and what barriers are preventing resolution?

Real-time pricing at the RTO interface(s), and the uncertainty of costs and price attendant to moving energy from one RTO to the other in real-time. The Whitepaper makes little mention of interface pricing beyond this:

Interface Pricing as a Solution to Congestion Overlap

MISO and SPP have coordinated on an initial joint analysis to identify the impact of congestion overlap during the first year of the M2M process. The results were shared with MISO and SPP stakeholders during a joint stakeholder meeting on May 31, 2017. Based on this analysis **MISO and SPP agree additional collaborative analysis is needed to determine whether there is a more appropriate solution for the MISO-SPP interface, however resource constraints and higher priority market improvement initiatives have delayed work on the analysis necessary to resolve this issue.**

Market participants should receive price signals that accurately reflect local supply, demand and deliverability. The January 2018 Big Chill and September 15, 2018 events are illustrative. In both cases leading up to the emergency EEA declarations, a supplier in SPP would only be aware of the interface price. Prior to centralized, RTO-administered markets, a control area operator in an energy deficient area would be on the phone soliciting energy from neighboring areas. The interface price is supposed to convey the information that had previously been communicated by individual control area power supply dispatchers. This does not appear to be happening.

As SPP staff has explained it, the MISO interface price is a weighted average of LMPs across all of MISO. This pricing construct did not provide accurate information as to the dire supply and demand situation within MISO South during the EEA events. While on January 17 and September 15 energy eventually did flow from SPP (and others) into MISO South, it required an emergency declaration for this to happen. An efficient SPP-MISO seam would allow for market transfers in the time period leading up to an emergency thereby, if not eliminating the emergency altogether, delaying and shortening the duration of the EEA. Why is available supply in neighboring markets not flowing into regions where the lack of supply is leading to emergency declarations?

2. How should the RTOs weigh the benefits of more efficient seams operation against focusing on maximizing intra-RTO efficiencies and operation?

Given the 80 plus GW in each RTO's GI queue, and recognizing much of the MISO GI requests are in the south and west of MISO along the SPP Seam, intra-RTO efficiencies and operation are increasingly going to result from more efficient RTO seams operations. For example, SPP's HITT initiative has identified the need for a number of fast start, ramp and headroom products to accommodate anticipated increased levels of renewables within the SPP BA. One can reasonably presume that the same sorts of discussions are taking place at MISO. More efficient operations across the RTO seams could potentially lessen the amount of these products needed in each RTO.

In addition, if operations across the seams are not efficient, then some level of economic interchange transactions are not occurring. The modeling of projects to reduce congestion in each RTO could incorporate this fact. If so, economic projects identified by these models become suspect, and transmission build based upon such planning runs the risk of locking in the costs of inefficient seams operations for the life of the transmission asset. These costs will be borne by each RTOs' transmission customers. Changes to market rules and seams administration can and should be explored and, when warranted, implemented before building transmission the economic justification for which may be, in whole or in significant part, the result of inefficient seams operations.

3. What areas of the whitepaper do you agree and disagree with? Why?

While it is true FERC recognizes seams issues and directs the development of JOAs to minimize such issues, it is a stretch to imply that FERC accepts that the development of RTOs and wholesale power markets would naturally result in "more acute" seams issues. At one point FERC had proposed a Standard Market Design.

Market seams do not arise naturally but instead result from the choices each RTO makes regarding how its markets should function. RTO market design differences are not fixed, physical constraints around which the respective RTOs must forever plan and operate. The joint RSC-OMS seams initiative is an opportune time to begin examining whether the purported benefits each RTO assigns to the most impactful RTO market design differences justify the costs, i.e. operational and market seams inefficiencies.

4. Are there seams issues that you believe were left out?

Yes. SPP and MISO should be asked to separately assess the feasibility and desirability of implementing coordinated transaction schedules ("CTS") between the two markets as has been done in the eastern RTO/ISOs. Is CTS feasible between SPP and MISO? If not, why not? If feasible, discuss qualitatively the associated benefits, costs and other trade-offs as well as the effectiveness to date in areas where CTS has been implemented.

Similarly, a real-time energy imbalance market comprised of the Cal-ISO and a number of neighboring large, non-market BAs has been established in the Western Interconnect. SPP and MISO should be asked what lessons can be drawn from the Western EIM that might potentially lead to better coordination and alignment of the SPP & MISO real-time energy markets.

Finally, SPP and MISO should be invited to provide and discuss any other market constructs/products either RTO believes might potentially provide value in lowering or eliminating market barriers to efficient interchange transactions.

5. What seems issue(s) require additional analysis and study prior to solution identification? What should the goal of such an analysis/study be and what metrics or other measurable information should it include?

The RTOs should be asked to accurately determine the existing total transfer capability between MISO and SPP. In addition, SPP and MISO should also calculate the percentage of ATC that is used when price differences between MISO and SPP suggest interchange transactions are economic. Price differences for this purpose should include examples of when the respective RTO LMPs diverge by a significant amount as well as when prevailing LMPs diverge from the interface price.

Also, the PJM MMU's most recent [2018 Quarterly State of the Market Report](#) provides in Section 9 "Interchange Transactions" Table 9-1, an itemization of the charges and credits that apply to an interchange transaction sourcing or sinking in PJM. SPP and MISO should prepare tables similar to Table 9-1 and identify for each charge and credit the extent to which the charge amount is known or determinable at the time of the transaction. And if not known or determinable at the time of transaction, is the charge or credit reasonably predictable, or volatile?

The goal of these analyses would be to determine how well the current set of RTO market rules encourage economic energy transfers between the RTOs, to identify those costs and charges applicable to interchange transactions that currently serve to discourage such interchange transactions, and ultimately the extent to which existing market seams (i.e., tariff and market practices that raise barriers to efficient interchange transactions) can potentially be minimized or even eliminated.