STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission	:	
On its Own Motion	:	23-NOI-01
Notice of Inquiry Regarding	:	
Ameren Illinois RTO Cost-Benefit Study	:	

INITIAL COMMENTS OF THE

STAFF OF THE ILLINOIS COMMERCE COMMISSION

Pursuant to the Commission's Notice of Inquiry issued August 3, 2023, the Staff of the Illinois Commerce Commission ("ICC Staff") does hereby submit these Initial Comments on the Ameren Illinois RTO Cost-Benefit Study ("Ameren Study").

I. Background

On July 21, 2022, the Commission issued an order in Docket No. 22-0485 directing Ameren Illinois ("Ameren") to conduct an analysis and study of its continued membership in Midcontinent Independent system Operator, Inc. ("MISO"). On July 21, 2023, Ameren filed the Ameren Study. On August 3, 2023, the Commission issued a Notice of Inquiry, establishing October 1, 2023, as the date for submission of initial comments, and November 1, 2023, as the date for submission of reply comments on the Ameren Study. ICC Staff now hereby submits these Initial Comments for consideration.

Illinois is divided between two regional transmission organizations ("RTOs"). These RTOs provide the state with both transmission planning and access to wholesale electricity markets, which in turn lead to lower cost, reliable energy for the state. The Commonwealth Edison ("ComEd") service territory, the portion of the state which encompasses Chicago and much of northern Illinois. ComEd is a member of PJM Interconnection, L.L.C. ("PJM"). The Ameren service territory covers central and southern Illinois. Ameren is a member of MISO.

MISO provides important benefits to the state of Illinois. MISO is an industry leader in interconnection queue development and transmission planning, features that are both crucial as the State pursues its ambitious clean energy goals. However, in other important ways, Illinois is not always a good fit with MISO. In the past decade, MISO pricing Zone 4 ("Zone 4"), which covers Illinois, has twice failed to meet its Planning Reserve Margin Requirement ("PRMR") as set by MISO. Zone 4's failure to secure sufficient capacity led to high prices for Illinois in MISO's Planning Reserve Auction ("PRA"). In the 2015/2016 auction, Zone 4 cleared at $150 MW/day while other states cleared around $3.50 MW/day. Then, in the 2022/2023 auction, Zone 4, along with the rest of MISO's north/central region, again cleared the cost of new entry ("CONE"), which was $236.66 MW/day. Significantly, typical clearing prices in the PRA are very low: $1.50 in 2017/2018, $5 in 2020/2021, and $10 in the most recent 2023/2024 auction.[1] These high prices have raised concerns about the MISO market being able to meet Illinois' resource adequacy needs. While new capacity resource

[1] MISO, Planning Resource Auction: Results for Planning Year 2023-24, May 19, 2023, https://cdn.misoenergy.org/2023%20Planning%20Resource%20Auction%20(PRA)%20Results628925.pdf

entry is expected in response to those high prices, it is unclear that the high capacity prices alone will correct the tightness in the capacity market. Reforms to the MISO capacity construct may be necessary.

A driving factor in Zone 4 experiencing price separation in the PRA is the nature of MISO's market. The PRA has serious market design flaws. First, MISO's PRA is not a true capacity market. Instead, it is a balancing auction, designed to allow a Load Serving Entity ("LSE") to procure or sell only small amounts of capacity. The PRA is not designed for an LSE to purchase a large portion of its needed capacity. Instead, the PRA is intended to serve vertically integrated states that exert more control over generation and explicitly plan to meet their reliability needs.[2] In contrast, Illinois is a retail choice state that relies on competitive markets to determine generation resource development, resource retirement, and capacity procurement. There is significant friction between MISO's PRA and Illinois' energy policy.

In addition, MISO currently uses a vertical demand curve to set prices in the PRA. The vertical curve can result in increased price volatility, with low capacity prices when capacity resources are abundant and then rapid increases in capacity prices when a zone is short of its PRMR. The vertical demand curve also fails to properly value generation beyond the zonal reliability requirement. A sloped demand curve treats generation beyond the capacity requirement like an insurance policy: every megawatt above the reliability requirement still has some value. While that extra megawatt's is unlikely to be needed, there may be a generator failure or unexpected demand. For

[2] See, MISO website, Resource Adequacy, https://www.misoenergy.org/planning/resource-adequacy/#t=10&p=0&s=FileName&sd=desc

that reason, there is some probability that the "extra" megawatt will be needed and will provide value to the grid. By failing to properly value these extra megawatts, generators have not received compensation for all the reliability they provide to the grid, which is factored into decisions about retirements or expansions. Therefore, the MISO PRA structure does not send a complete signal that would better incent new generation or slow generator retirements.[3]

Taken together, these features of the MISO PRA, unless corrected, may not be the best fit with Illinois' retail access policy and could lead to continued price separation in future PRAs. As currently designed, Ameren may be better suited for membership in the PJM, which has a true capacity market that allows LSEs to procure necessary capacity through the market.

Ameren worked with Charles Rivers Associates ("CRA") to draft the Ameren Study.[4] The Ameren Study raises important points about the costs of Ameren moving from MISO to PJM. ICC Staff does not have major concerns with CRA's methods or conclusions, but with these comments ICC Staff would like to place some of CRA's conclusions into a more specific context that are important to consider for future policy decisions.

II. The 10-Year Period Used in the Study May Underestimate the Benefits and/or Costs of Ameren Illinois Joining PJM

CRA's study methodology analyzed two different cases over a 10-year period from 2025-2034:

[3] Potomac Economics, 2021 State of the Market Report for the MISO Electricity Markets, https://www.potomaceconomics.com/wp-content/uploads/2022/06/2021-MISO-SOM_Report_Body_Final.pdf, June 2022, p. vii-ix

1. MISO Zone 4 remains in MISO ("Status Quo Case"), and
2. MISO Zone 4 joins PJM as of January 2025 ("Join PJM Case")[5]

CRA chose a ten-year time frame for the Ameren Study, consistent with the Commission order in Docket No. 22-0485.[6] Staff recommended this time frame in its initial Staff Report to the Commission.[7] Based in part on the study results, Staff now believes that, while reasonable to assess initial impacts, this time frame may not capture all the benefits of new transmission over time and undervalues transmission assets. Transmission lines can last for decades. While the poles supporting the lines and other associated equipment may need regular maintenance, the lines themselves can last for over fifty years.[8] Reflecting transmission lines' long life, MISO's Futures – a long-term transmission planning project – operates on a 20-year time horizon.[9] Even MISO's regular local reliability and market efficient planning processes consider benefits beyond 10 years.[10]

If the benefits of transmission are considered over a longer and more realistic time frame, costs that are prohibitively high in the Ameren Study could potentially be mitigated. ICC Staff is not asking the Commission to direct Ameren to expand or redo the study but raises this point for the Commission's consideration. ICC Staff recognizes

[5] Ameren Study, at 1
[6] Illinois Commerce Commission Initiating Order, Docket 22-0485 https://www.icc.illinois.gov/docket/P2022-0485/documents/326279
[7] Staff Report, Docket No. 22-0485, July 21, 2022, at 3
[8] Jennifer Sutton, MIT School of Engineering, Ask an Engineer: "How Do Electricity Transmission Lines Withstand a Lifetime of Exposure to the Elements?", April 26, 2010, https://engineering.mit.edu/engage/ask-an-engineer/how-do-electricity-transmission-lines-withstand-a-lifetime-of-exposure-to-the-elements/
[9] MISO, Future Planning Scenarios, https://www.misoenergy.org/planning/transmission-planning/futures-development/
[10] MISO, MTEP23, 2021, p 9, https://cdn.misoenergy.org/DRAFT%20MTEP23%20Chapter%201%20-%20Transmission%20Planning%20Overview629963.docx

that Ameren's transition from MISO to PJM would be costly, especially in the short term. However, ICC Staff wants to underscore that those costs may be spread across a much longer time frame than the Ameren Study assumes. If that time frame were enlarged, the MISO to PJM transition costs may not reflect such a drastic impact on market participants and ratepayers over time.

III. The Study Discounts the Reliability Risks of Remaining in MISO

In evaluating the impacts of moving Zone 4 from MISO to PJM, the Ameren Study notes that "[t]he results of the sampling indicate MISO is subject to more severe tail events at 0.1 LOLE as the planning horizon progresses."[11] It explains that "[t]his is driven by the resource mix in MISO as compared to PJM by the end of the forecast period – MISO sees a more significant storage and solar portfolio which, under high demand conditions, become exhausted and unable to provide energy during the sunset to sunrise period. Overall, the results point toward PJM having a more resilient system as compared to MISO which would be a benefit in the Join PJM Case."[12] This is a significant result and the inability of the MISO market to prevent unserved demand may be one of the primary reasons for considering a change in RTO participation. Staff is concerned that the Ameren Study relegates it to the portion of the study examining qualitative concerns and does not include it within its cost benefit quantification.

IV. The Study Assumes that all of Zone 4 Would Either Join PJM or Remain in MISO

The Ameren study assumes that due to the level of interconnection and interdependence of Ameren, City Water Light and Power ("CWLP"), and Southern

[11] Ameren Study, at 36.
[12] Id.

Illinois Power Co-operative ("SIPC") that the entirety of Zone 4 would either join PJM or remain in MISO.[13] This assumption was confirmed with MISO, Ameren, and the ICC Staff before proceeding with analysis, but not with CWLP or SIPC.[14]

While reasonable for the study's purposes, the assumption that all Illinois utilities in MISO will shift over to PJM may not actually occur. Non-Ameren utilities may decide to stay in MISO. If some utilities remained in MISO, this would have an impact on both the exit fees as well as the capacity costs that drive the costs identified in the Ameren study. Smaller utilities choosing to stay in MISO would likely have a small, yet meaningful impact on Ameren's transition costs; while these utilities serve a smaller load, there are coordination activities that will need to continue to occur, and management of the flow of energy and markets across the MISO-PJM seam would apply to the variance between Ameren, CWLP, and SIPC much as the Ameren and ComEd seam exists today.

V. The Study May Overestimate the Level and Impact of Increased Capacity Costs

The Ameren Study modeled both PJM and MISO capacity markets to simulate the impact on capacity costs of Zone 4 joining PJM.[15] The Study concludes that there is a net cost of $3.345 billion to Illinois over ten years in the Join PJM Case, compared to Status Quo Case.[16] The Study attributes this increase in capacity costs to: (1) PJM's use of a sloped demand curve, which resulted in Zone 4 acquiring significantly higher levels of capacity; (2) PJM's use of an annual capacity product, which leads to overall

[13] Ameren Study, at 1
[14] Id.
[15] Ameren Study, at 21-22
[16] Ameren Study, at 22

higher capacity prices in Zone 4;[17] (3) The addition of Zone 4, which is considered short of in-zone capacity, drives up the overall PJM RTO-level capacity prices;[18] and (4) Zone 4 being highly connected to ComEd could lead to price separations for the two zones together.[19]

It is reasonable to expect capacity prices in the ComEd zone to increase with Ameren Illinois joining PJM. However, the Study doesn't attempt to estimate the impact that these increasing capacity prices could have on the amount of capacity resources in the combined ComEd/AIC zone. Increased capacity prices would likely incentivize the construction of new generation/capacity resources and/or delay the retirement of existing resources, ultimately pushing capacity prices lower.

The Ameren Study posits that if Ameren were to join PJM, the downward sloping demand curve used by PJM would likely result in Zone 4 acquiring significantly higher amounts of capacity. ICC Staff notes that MISO is currently exploring the adoption of a sloped demand curve in its capacity construct, similar in design to the curve used by PJM in its capacity construct. If MISO implements a sloped demand curve, it is reasonable to expect both the price and quantity of capacity procured for Zone 4 to increase under the Status Quo Case, effectively rendering the impact of a sloped demand curve on capacity prices under either scenario as relatively moot. That is, if MISO adopts the sloped demand curve, that aspect of the construct would be less determinative in any RTO comparative analysis.

[17] Ameren Study, at 22
[18] Id.
[19] Ameren Study, at 22

VI. As a Retail Access State, Illinois' Policies may be a "better fit" under PJM than in MISO

The Ameren Study estimates that moving Zone 4 to PJM would cost Illinois ratepayers approximately $28 million in exit and integration fees. However, the Ameren Study does not attempt to estimate any benefits of participating in an RTO, such as PJM, that has policies and operates markets that are more in-line with Illinois' policies.

As a retail access state with no regulatory authority over generation assets, Illinois relies on a robust wholesale market to discipline retail electricity prices. Currently, except for a small segment of Michigan's load, Illinois is the only retail access state in MISO and most MISO-member utilities practice some form of integrated resource planning. Without the authority to direct construction of generation resources, Illinois is reliant on MISO's capacity market to provide the signals necessary to incentivize the new construction of generation resources necessary to ensure reliability and meet load obligations both in Zone 4 and across MISO. MISO's capacity market is effectively a residual market that allows generation owners to offer any excess capacity that they may have into the annual auction. Past auctions show that MISO's residual capacity market construct does not meet the needs of a retail state such as Illinois. Indeed, the clearing prices fluctuate wildly, based on the amount of excess capacity available from other Zones and the presence of transmission constraints that may limit the transfer of power to Zone 4. Such an auction design is not complementary to Illinois polices and is a detriment to Illinois ratepayers. Staff acknowledges that MISO is taking steps to address issues with its capacity market. However, such efforts are still in the discussion phase and will likely not be implemented for some time.

In contrast to MISO, most PJM members are retail access states that rely on competitive markets to discipline electricity prices. There are issues with PJM's capacity construct, but for the most part, it effectively incentivizes the construction of new capacity and provides load-serving entities in the ComEd zone with a process to meet their capacity obligations. Another benefit to Illinois is PJM's effort to establish a clean energy market, which should help Illinois achieve its clean energy policy objectives.

One significant concern with Zone 4 leaving MISO and moving to PJM is PJM's lack of long-term transmission planning. The development of long-term transmission projects is essential if states such as Illinois are to achieve their public policy objectives, as the projects are necessary to move remotely located clean energy to consumers. Staff acknowledges that PJM has started discussions on long-term transmission planning, but MISO is already in the process of developing and approving a significant long-term transmission build-out. PJM's lack of an established long-term transmission planning process presents a substantial obstacle for Illinois.

ICC Staff acknowledges that there would be costs associated with Zone 4 moving to PJM. However, the Ameren Study does not attempt to quantify the off-setting benefits Ameren ratepayers would likely derive from participating in an RTO with policies and markets that more directly align with the competitive/retail policies of Illinois. In addition, Ameren transferring to PJM comes with several qualitative benefits, such as improvements of emissions, better outcomes for environmental justice

communities, and resiliency.[20] Quantifying such benefits would be difficult but these benefits, along with the better match between Illinois state policy and PJM's structure should not dismissed. If these benefits are significant, at some point Ameren's participation in PJM would likely prove to be more beneficial to Ameren ratepayers than Ameren staying in MISO.

VII. CONCLUSION

WHEREFORE, for the reasons set forth above, the Staff of the Illinois Commerce Commission respectfully requests that the Commission consider these Initial Comments.

Respectfully submitted,

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[20] Ameren Study, at 31-38