# BEFORE THE PUBLIC SERVICE COMMISSION
# OF THE STATE OF MISSOURI

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| In the Matter of the Establishment of a Working<br>Case Regarding FERC Order 2222 Regarding<br>Participation of Distributed Energy Resource<br>Aggregators in Markets Operated by Regional<br>Transmission Organizations and Independent<br>Systems Operators | )<br>)<br>)<br>)<br>)<br>) | **File No. EW-2021-0267** |

## STAFF'S REPORT

**COMES NOW** Staff of the Missouri Public Service Commission, through counsel, and states as follows:

1. In its Order 719, dated October 17, 2008, the Federal Energy Regulatory Commission (FERC) stated that demand response aggregators may participate in wholesale energy markets, subject to an "opt out" provision that states could chose to implement. On December 21, 2009, in response to FERC Orders 719 and 719-A, the Commission opened a docket, EW-2010-0187, to investigate the implementation of various demand side programs. The Commission in its Order establishing that docket references the new FERC policies and states, "The Commission will explore the best model or models to achieve the requirements of MEEIA, through state demand-side programs, wholesale market opportunities available in MISO or SPP, or possible hybrid approaches and the implications for resource planning under various approaches." The Commission issued another Order on March 31, 2010 temporarily prohibiting the operation of aggregators of retail customers (ARC) specifically by third-parties customers. The Commission cited a need for time to address the issues raised in the EW-2010-0187 docket in issuing the temporary prohibition.

2. The Commission ordered Staff to revisit the issue of distributed energy resources (DER) and explore the current status of ARCs in Missouri in an Order issued September 6, 2017, in Docket No. EW-2017-0245 opened to explore emerging issues in utility regulation. Staff compiled a report containing a wealth of relevant information relating to DER, which was filed in that docket on April 5, 2018.

3. On September 17, 2020, FERC issued Order 2222, which requires Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) to revise their tariffs to allow DER aggregators to participate in wholesale energy markets. The deadline for compliance filings was set as July 19, 2021. On March 18, 2021 FERC issued Order 2222-A, which clarifies that all heterogeneous aggregators have access to wholesale energy markets, even those that include a demand response component.

4. On February 23, 2021, the Commission opened this new working file to determine how the Commission may best respond to changes that will result from implementation of FERC Order 2222 and to review its current practices regarding DER aggregation. The Commission ordered Missouri investor-owned energy utilities and other interested stakeholders to respond with suggestions by March 31, 2021. It also ordered Staff to compile responses and file a report and suggestions by April 30, 2021.

5. Parties to the docket: Evergy Missouri Metro and Evergy Missouri West; Ameren Missouri; Renew Missouri; Midwest Energy Consumers Group, and Voltus, Inc. filed comments, which are summarized in Staff's Report, attached here as Appendix A. Staff recommends that the Commission order a series of workshops to track the progress of implementation of FERC Orders 2222 and 2222-A and to discuss the development of

any necessary rulemakings related to that implementation. Staff could file periodic status reports in this docket to keep the Commission apprised of the workshop findings.

**WHEREFORE,** Staff submits this report and accompanying suggestions for the Commission's information and consideration; and asks that the Commission order Staff to proceed as necessary based on this information.

Respectfully submitted,

**/s/ Karen E. Bretz**
Karen E. Bretz
Senior Counsel
Missouri Bar No. 70632
Attorney for the Staff of the
Missouri Public Service Commission
P.O. Box 360
Jefferson City, MO 65102
573-751-5472 (Voice)
573-751-9285 (Fax)
Karen.Bretz@psc.mo.gov

**/s/ Whitney Payne**
Whitney Payne
Senior Counsel
Missouri Bar No. 64078
Attorney for the Staff of the
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102
(573) 751-8706 (Telephone)
(573) 751-9285 (Fax)
whitney.payne@psc.mo.gov

## CERTIFICATE OF SERVICE

I certify that copies of the foregoing have been emailed to all parties and/or counsel of record on this 30th day of April, 2021.

**/s/ Karen E. Bretz**

## MISSOURI PUBLIC SERVICE COMMISSION

## STAFF REPORT

**IN THE MATTER OF THE ESTABLISHMENT OF A WORKING CASE REGARDING FERC ORDER 2222 REGARDING PARTICIPATION OF DISTRIBUTED ENERGY RESOURCE ADEQUACY IN MARKETS OPERATED BY REGIONAL TRANSMISSION ORGANIZATIONS AND INDEPENDENT SYSTEM OPERATORS**

**FILE NO. EW-2021-0267**

**APRIL 30, 2021**

**Appendix A**

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## FILE NO. EW-2021-0267

## I. Executive Summary

On February 24, 2021, the Commission issued an Order Opening a Working Case to Consider the Commission's Response to FERC Order 2222. The Commission ordered the investor owned utilities to provide suggestions on "how the Commission may best respond to the changes that will result from implementation of FERC Order No. 2222, and to review its current practices in these areas," and invited any interested stakeholder to provide suggestions. The investor owned electric utilities and several stakeholders submitted comments on March 31, 2021 and April 16, 2021. The Commission further ordered Staff to file a report summarizing the comments and any recommendations. This Staff Report provides a summary of the information provided and includes recommendations for further actions. Specifically, Staff recommends the Commission utilize this docket to conduct further workshops to consider the following topics:

- Interconnection standards for distributed energy resources ("DER");
- Protecting against unintended consequences such as double counting/compensation of resources;
- Consumer protection; and
- Whether the Commission has authority over requiring a registry system for participant DER.

Additionally, several stakeholders[1] recommend the Commission reconsider its Order Temporarily Prohibiting the Operation of Aggregators of Retail Customers dated March 31, 2010. Staff recommends the Commission continue to gather information in this docket regarding the Operation of Aggregators of Retail customers.

## II. General Remarks

Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri"), Evergy Metro, Inc. d/b/a Evergy Missouri metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West (collectively, "Evergy") and The Empire District Electric Company, a Liberty Utilities company ("Liberty") commented on the complexity of implementing FERC Order 2222 and identified several potential issues. Ameren Missouri notes that "the implications of FERC Order No. 2222

[1] Midwest Energy Consumers Group, Renew Missouri, and Voltus.

on regional transmission organization ("RTO") tariffs and operations are multifaceted and complex."[2] Overall, Ameren Missouri believes that Order No. 2222 is still in its early stages of development, thus "the most [Ameren Missouri] can do to aid the Commission's inquiry is to identify a number of those issues and to offer a high-level discussion of the implications of each."[3] These issues include operational impacts, visibility, reliability, cost allocation, cost assignment and cost recovery (further discussed in sections three through five below). Similarly, Evergy and Liberty commented that the Order is still in its initial stages of development, and both plan to actively participate in ongoing discussions regarding the implementation of Order.

Ameren Missouri, Evergy, and Liberty recommend the Commission be engaged in the activities related to FERC Order 2222 and are supportive of stakeholder collaboration. Ameren Missouri suggests that "[t]he Commission direct its Staff to lead working groups of [individuals with knowledge of RTO markets and operation, distribution systems, and retail utility ratemaking] so that they may discuss the below issues and work to develop solutions and recommendations to them."[4] Evergy suggests that "it would be beneficial for the Commission to be actively engaged in the RTO stakeholder processes and to establish stakeholder working groups as appropriate which provide opportunities to educate, inform, and collaborate as these proceedings develop."[5] Liberty plans to actively participate in ongoing communications regarding the implementation of FERC Order 2222, both at the RTO level and the state level.

The Midwest Energy Consumers Group ("MECG"), Renew Missouri Advocates ("Renew Missouri"), and Voltus, Inc. ("Voltus") recommend the Commission reconsider its 2010 order[6] banning aggregators of demand response retail customers. Renew Missouri further notes that this will allow "relevant RTOs [to] develop more robust and clear governing tariffs on DER aggregation in the marketplace."[7]

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[2] Ameren Missouri's Response to Order Opening Working Case, Page 1, Paragraph 2

[3] Ameren Missouri's Response to Order Opening Working Case, Page 3, Paragraph 7

[4] Ameren Missouri's Response to Order Opening Working Case, Page 8, Paragraph 24

[5] Evergy Missouri Metro and Evergy Missouri West's Response to Order Directing Comments, Paragraph 37

[6] Order Temporarily Prohibiting the Operation of Aggregators of Retail Customers dated March 31, 2010. In the Matter of an Investigation into the Coordination of State and Federal Regulatory Policies for Facilitating the Deployment of all Cost-Effective Demand-Side Savings, File No. EW-2010-0187

[7] Renew Missouri Comment's, Page 3 and 4, Paragraph 8

## III. Timeline

Both the Midcontinent Independent System Operator, Inc. ("MISO") and the Southwest Power Pool ("SPP") petitioned FERC for an extension of time to comply with FERC Order 2222. MISO requested a nine-month extension until April 18, 2022 to submit a compliance filing. On February 18, 2021, SPP filed a Motion for Extension of Time to submit revisions to its Open Access Transmission Tariff to comply with the requirements of Order No. 2222. SPP requested an extension of the compliance filing date to April 28, 2022. SPP indicated in its motion that the earliest date to implement Order No. 2222 changes would be the first quarter of 2024. Also, FERC recently issued a Notice of Inquiry (NOI) in its Docket RM21-14 into the existing opt-out for demand response permitted in Order 719 and 719-A.

On April 9, 2021, FERC granted MISO's and SPP's requests for extension to implement Order 2222 through April 18, 2022 and April 28, 2022, respectively.

## IV. Consumer Protection Versus Benefits

Ameren Missouri and Evergy noted concerns with consumer protection, while Voltus and Renew Missouri commented on the benefits of demand response aggregation. The consumer protection concerns Ameren Missouri and Evergy noted include deceptive business practices, marketing, registration of aggregators, and customer data privacy. Ameren Missouri notes that "[i]t is not clear what role the MoPSC has in ensuring that Missouri consumers are protected from these potential concerns, but it is an issue the Commission would need to examine and resolve. More specifically, a relevant question is: Does the Commission (or other State entity) have the authority to require the registration of aggregators doing business in Missouri, and to place conditions on this registration?"[8] Evergy also suggests that "[i]t may be appropriate for the Commission to consider a broader role in ensuring consumer protections, such as requiring the registration of aggregators doing business in Missouri and establishing conditions for participation."[9]

Voltus stated that implementing demand-response aggregation creates economic benefits to both ratepayers and commercial and industrial customers while also improving grid reliability. Voltus pointed to instances where demand response helped avoid emergency response procedures

[8] Ameren Missouri's Response to Order Opening Working Case, Page 4, Paragraph 6
[9] Evergy Missouri Metro and Evergy Missouri West's Response to Order Directing Comments, Paragraph 16

in Texas during the summer of 2018 and in Pennsylvania-New Jersey-Maryland Interconnection (PJM Interconnection) during the 2014 polar vortex. In terms of creating economic benefit to ratepayers, Voltus compares the cost of a new simple cycle peaking power plant, credits paid through interruptible tariffs, and demand response capacity, asserting that demand response is the lower-cost method. Voltus also points to the potential for economic benefits to commercial and industrial customers through participation in SPP's Operating Reserves Program.

Renew Missouri points to potential benefits of demand response, such as reducing system peak demand costs, facilitating high penetration of variable renewable resources, and increasing system reliability. Further, Renew Missouri asserts demand response improves load diversity, asset utilization, and system load factor, potentially resulting in a lower cost of service.

## V. Technical Considerations

### *a. Metering and Telemetry*

Ameren Missouri and Evergy commented on concerns with metering and telemetry. Ameren Missouri notes that "DER represents a wide variety of products and services, including energy, capacity, and ancillary services… it is necessary to be able to meter and monitor each of these separate services",[10] especially when considering the wide variety of equipment/systems that individual retail customers might use simultaneously. Ameren Missouri and Evergy both commented on the lack of existing metering and communication technology. Evergy further commented on the cost implications of allowing behind-the-meter resources, noting that "the metering and billing systems to track and settle costs applicable to each separate use could become complex and costly to implement."[11]

As noted previously, the RTOs requested and were granted an extension on their FERC Order 2222 compliance filings; therefore, the electric utilities have outstanding questions regarding how each RTO will establish metering and telemetry requirements for DER aggregation. Evergy notes, "it is unknown if any Evergy metering data will be required to support SPP's DER aggregation dispatch, settlement or auditing purposes."[12] Ameren Missouri notes potential Commission rule or tariff changes related to metering and telemetry may be needed but whether those changes will be needed is dependent on RTO implementation.

[10] Ameren Missouri's Response to Order Opening Working Case, Page 4, Paragraph 7
[11] Evergy Missouri Metro and Evergy Missouri West's Response to Order Directing Comments, Paragraph 31
[12] Evergy Missouri Metro and Evergy Missouri West's Response to Order Directing Comments, Paragraph 30

***b. Distribution System Infrastructure and Operations***

Ameren Missouri, Liberty, and Evergy commented on the need for distribution system investments. Ameren Missouri expects a need for distribution system monitoring and two-way communication capabilities. Evergy expects the need for investments to add system functionality and processes that do not currently exist. Liberty commented on several potential cost impacts such as SCADA system upgrades, software bridges between data collection and system modeling, distribution system upgrades, and expansion of communication platforms.[13] All utilities commented on the need to identify cost causation so that costs, including those related to distribution system investments, are properly allocated.

***c. Data Communication***

Ameren Missouri comments on the need to monitor and measure the various services that both standalone DERs and retail customers would provide to aggregators. "In addition, there will be a need for operations and communication protocols to ensure reliability between the load-serving entity (LSE), DER, any third-party DER aggregator, and the RTO/ISO."[14] However, according to Ameren Missouri's response, "[w]hat the Commission may need to do regarding these issues is unclear, especially since RTO processes regarding implementation of Order 2222 remain under development".[15]

Regarding data and information requirements, Liberty commented that the Commission will need to consider the "conveyance of data in a parallel path to the local utility (assuming RTO will specify data requirements for market participation/solving)."[16] Liberty also recommends that the Commission require DERs to share data and information with their respective utilities. "Liberty needs access to [such] data to ensure it meets its obligations as a [Load Serving Entity] with the SPP, the RTO planning reserve margin requirements, and the requirements under Chapter 22 of the Commission's Rules for resource planning."[17] Further, Liberty recommends that the Commission encourage RTOs to collect reliability data that will be used to ensure the reliability of its electric utilities is maintained.

[13] Liberty's Response to Order Opening Working Case: Page 2; Paragraph 2 and Page 3; Paragraph 1
[14] Ameren Missouri's Response to Order Opening Working Case, Page 6, Paragraph 13
[15] Ameren Missouri's Response to Order Opening Working Case, Page 6, Paragraph 15
[16] Liberty's Response to Order Opening Working Case: Page 2; Paragraph 2
[17] Liberty's Response to Order Opening Working Case: Page 3; Paragraph 4

### *d. Study Requirements*

In Order 2222, FERC requires each RTO/ISO to modify its tariff to incorporate a process for timely review by a distribution utility of the individual distributed energy resources that comprise a distributed energy resource aggregation. "[E]ach RTO/ISO must coordinate with distribution utilities to develop a distribution utility review process that includes criteria by which the distribution utilities would determine whether (1) each proposed distributed energy resource is capable of participation in a distributed energy resource aggregation; and (2) the participation of each proposed distributed energy resource in a distributed energy resource aggregation will not pose significant risks to the reliable and safe operation of the distribution system."[18] FERC responded to comments regarding lengthy distribution utility reviews of interconnections as a barrier to market participation. FERC suggested 60 days as a reasonable timeline to complete these distribution utility studies, though notes the RTO should propose a timeline which meets the needs of its region. Ameren Missouri commented that "[i]t is not clear at this time what additional burden these additional study requests will impose on each utility. Questions of whether each resource must be studied or whether the aggregation in total is to [be] studied are as yet unanswered."[19] FERC explained in Order 2222 that existing state and local interconnection processes are expected to provide the necessary information to inform the distribution utility review process and the RTO/ISO requirements do not prevent state and local regulators from amending their existing processes.

### *e. DER Curtailment*

Ameren Missouri commented that DER aggregation "may increase loadings and result in localized issues on the distribution system, [which] could require distribution system investment or other expenses for electric utilities in Missouri. [Applicable] rules … for curtailments arising from management of the distribution system would need to be established. The basis for curtailment should include not only scheduled distribution management (e.g., maintenance) but also unexpected events such as those due to weather. Protocols will also be necessary to develop to address the communication and coordination of these various curtailments with aggregators and the MISO/RTO".[20]

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[18] FERC Order 2222, Paragraph 292

[19] Ameren Missouri's Response to Order Opening Working Case, Page 7, Paragraph 18

[20] Ameren Missouri's Response to Order Opening Working Case, Page 7, Paragraph 19 and Paragraph 20

### *f. Cost Causation and Allocation*

As previously noted, Ameren Missouri and Evergy expect significant distribution system investments, which prompts questions regarding cost causation and allocation. Ameren further notes that "[t]he Commission will need to determine the appropriate path (e.g., tariff change, individual agreements, etc.) for recovering the associated costs of complying with the Order."[21] Similarly, Liberty states that the associated costs may be relatively significant for both Liberty and its customers. However, until the RTO develops the structure for implementing FERC Order 2222, the potential required upgrades and their associated costs are unknown. Regarding safety, additional training programs would be needed for the operational personnel; therefore, Liberty recommends that the Commission consider the safety of operational personnel, among other considerations, when addressing FERC Order 2222.

## VI. <u>Changes to Existing Rules or Tariffs</u>

Ameren Missouri, Liberty, and Evergy commented on potential changes to existing rules and tariffs. Ameren Missouri notes that "… until the RTO processes become much clearer and well-developed, there will be significant challenges respecting what policies, rules, or tariff changes the Commission or perhaps the state may need to adopt, and when state-level changes can occur".

Below are examples of potential issues noted by the electric utilities that may require revisions to Commission rules or tariff language:

- Commission rules on interconnection standards for DER and related tariffs, in particular, issues such as consumer protection, metering, monitoring, and distribution system infrastructure issues and operational bounds.
- Commission rules or tariff changes related to protecting against unintended consequences such as double counting/compensation of resources and inappropriate arbitrage of standard offer tariffs, and to address customer privacy issues.
- Commission rules regarding disputes between aggregators and the utility.
- Commission rules to require a registry systems for participant DER.

[21] Ameren Missouri's Response to Order Opening Working Case, Page 8 and 9, Paragraph 24

Evergy suggested “it may be appropriate to consider creating a new Wholesale Distribution tariff that would provide grid access for wholesale transactions, and to ensure transparent policies are in place to avoid concerns with double-counting.”[22] Liberty recommends that the Commission continue to participate in the SPP rulemaking processes regarding how the rule would materialize. “Furthermore, Liberty submits that Staff should consider what existing tariffs are currently in existence for Missouri investor-owned utilities that could be similar in nature to RTO/ISO participation for services”.[23]

In addition, Liberty recommends development of “explicit rules and definitions for ‘services’ so that both utilities and participants can fairly evaluate potential retail compensation services for overlap from then-current RTO rules”.[24] Finally, Liberty believes that DER programs will continue to expand, and recommends that the Commission have a “defined process” in place to evaluate future “proposed rule changes by RTOs regarding market services and/or products so that existing programs that may have not been considered as “overlapping” prior to the development of the new services/products can be evaluated within a defined framework that minimizes the potential for disagreement of similar or same services”[25]

[22] Evergy Missouri Metro and Evergy Missouri West’s Response to Order Directing Comments, Paragraph 26
[23] Liberty’s Response to Order Opening Working Case: Page 1; Paragraph 4
[24] Liberty’s Response to Order Opening Working Case: Page 1; Paragraph 4
[25] Liberty’s Response to Order Opening Working Case: Page 2; Paragraph 1