

Rush Island Energy Center Retirement Planning Update

5. Transmission Planning – As previously reported, the projects that must be completed before Rush Island can be retired are as follows:

- Installation of a larger transformer at Ameren Missouri's Wildwood substation. **Update** – this project would be better described as the replacement of an existing transformer with a larger transformer.
- Installation of a capacitor bank at Ameren Missouri's Overton Substation, and
- Installation of four Static Compensators (STATCOM) in and around the St. Louis region.

Also as reported previously, there are certain other projects to be completed to meet Ameren Missouri's local transmission planning criteria with the retirement of Rush Island, but the Rush Island retirement will be independent of these projects going into service:

- Reconductoring 50 miles of conductor on the 345 kV Coffeen to Roxford transmission line,
- Re-tap the breaker current transformers at the 138kV substation and install new line metering set on the transmission line to Spalding. **Update** – this project is better described as a re-tap of current transformers as well as installation of new metering at the 138kV Hannibal West substation,
- Raising two structures on the 138kV Neoga-Effingham Northwest transmission line and installing new shunts on the entire line, and
- Constructing a new 138kV transmission line from Beehive to Dupo Ferry and expanding the capacity of the existing Ameren Illinois Dupo Ferry and to Beehive substations to accommodate the new line.

6. Operational Planning – Similar to previous reports, the Company continues to work on multiple operational issues that will have to be addressed both during the transition and after retirement of the plant, including creating staffing plans, appropriately adjusting operations and maintenance expenditures and capital investment to reflect retirement of the plant, inspecting remaining inventory to see what is usable elsewhere, and making plans to leave equipment at the plant in safe condition (draining oil, water, etc.), to name a few. Ameren Missouri started with the shutdown plans it developed for the Meramec Energy Center and is modifying them for Rush Island. The Company has made progress on this work, but the final structure of these plans depends

upon knowing the new Rush Island retirement date and on how the facility will operate until retirement, which the Company cannot know until it receives a modified order from the District Court.

WHEREFORE, Ameren Missouri requests the Missouri Public Service Commission accept this filing as compliant with the order to file monthly status reports.

Respectfully submitted,

/s/ Wendy K. Tatro

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing was served on the Missouri Public Service Commission Staff and the Office of the Public Counsel via electronic mail (e-mail) or via regular mail on this 15th day of August, 2022.

/s/ Wendy K. Tatro
Wendy K. Tatro

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION**

UNITED STATES OF AMERICA,

Plaintiff,

SIERRA CLUB,

Plaintiff-Intervenor,

v.

AMEREN MISSOURI,

Defendant.

Civil Action No. 4:11-cv-00077-RWS

AMEREN’S STATUS REPORT AND NOTICE OF FILING PROPOSED ORDER

Pursuant to the Court’s July 5 and July 19 Orders, Ameren Missouri (“Ameren”) respectfully submits this Status Report and Notice of Filing Proposed Order. The Parties have been engaging in a good faith conferral through several conversations and exchanging drafts, in an effort to develop an agreed proposed order to present to the Court governing Rush Island’s operation to ensure system reliability prior to its retirement. The Parties have narrowed areas of disagreement, and will continue to confer on those areas in an effort to reach agreement wherever possible. The Parties have not yet been able to present an agreed proposed order, however, in part, because of events beyond their control. The Midcontinent Independent System Operator (“MISO”) has been engaged in an ongoing evaluation of electric transmission system reliability needs and operating mechanisms in relation to the timing of Ameren’s planned retirement of Rush Island. (Ex. 1, July 28, 2022 Decl. of Andrew Witmeier, at ¶ 2.) MISO continues to review potential reliability constraints and has been, and continues to be, engaged in defining specific

operating parameters for Rush Island. This assessment necessarily bears on the issues about which the Parties have been conferring in their efforts to reach agreement on a proposed order to present to the Court.

Although MISO's assessment is ongoing, it has now clarified certain principles that the expected operation of Rush Island for reliability purposes would follow. These principles are explained in the July 28 Declaration of Andrew Witmeier, MISO's Director Resource Utilization, included as Exhibit 1 to this submission:

The basis for MISO operation of Rush Island Units 1 & 2 would be for reliability purposes as those are identified by MISO. The expected operation, subject to MISO designating these units as SSR via a FERC filing and a subsequent approval by FERC, would be expected to follow the principles stated below:

- a. Operation would be subject to orders issued by the United States District Court for the Eastern District of Missouri in *United States v. Ameren Missouri*, No. 4:11-cv-00077-RWS.
- b. The Rush Island units would be committed concurrently, or interchangeably on a single unit basis, depending upon circumstances on the transmission system.
- c. MISO would not commit the Rush Island units solely based on economics (i.e. based on the cost of operation).
- d. MISO would commit the Rush Island units for reliability purposes:
 - i. The Rush Island Units would be committed to serve the reliability conditions identified in the final Rush Island Attachment Y Study Report (such Report to be filed at FERC) based on such measures as forecasted weather and forecasted daily demand levels in the geographic areas for which the reliability service is intended as described in the Report.
 - ii. The Rush Island Units would also be committed in the event MISO declares or forecasts an Energy Emergency or MISO determines that commitment of the Rush Island Units would respond to unstable conditions on the transmission system.
- e. If not already committed, MISO would also commit the Rush Island units for freeze protection (i.e. according to predetermined weather conditions)

to maintain their integrity so that they continue to be available to provide reliability service.

(Ex. 1 at ¶ 3.)

As part of the Parties' conferral, Ameren provided to Plaintiffs on July 27 a draft proposed order that included language similar to the principles laid out above. Ameren informed Plaintiffs at that time that the proposal was contingent on the possibility MISO might provide additional input affecting the proposal, but MISO has now provided clarification through the declaration in Exhibit 1. Ameren shared the declaration with Plaintiffs shortly after receiving it from MISO this morning. Ameren acknowledges that Plaintiffs may need additional time to consider the latest information from MISO, and Ameren's latest proposal. Ameren has conveyed to Plaintiffs that it will continue to confer with them on these issues and Ameren understands that Plaintiffs also intend to continue the Parties' good faith conferral.

Ameren summarizes below the current status of areas of agreement and remaining areas of disagreement that the Parties still need to work through.

Current Status of Areas of Agreement

The Parties have found common ground on certain principles regarding the timing of Rush Island's retirement and the need for limited operation of the units, managed by MISO, to ensure the reliability of the transmission system until transmission projects can be completed that will alleviate reliability concerns and allow for full retirement of the plant. The Parties' most recent respective proposals to each other still articulate these principles in somewhat different forms, but the substance of their positions has converged and working through any differences in language can be a focus of the Parties' efforts as they continue to confer.

Retirement of Rush Island. The Parties agree on language regarding the retirement of Rush Island in lieu of installing FGD (item 1 of each of the Parties' respective current draft

proposals). The only difference being that Ameren believes it is prudent to include language making clear that the Court has discretion to extend the retirement schedule if the Court determines, based on a showing by Ameren, that circumstances warrant such an extension. Ameren has included this language to reflect the discussion at the July 1 status hearing where the Court declined to change the March 2024 remedy ruling end date under present facts and circumstances but clarified that this does not “mean forever or never that 2024 is the drop-dead moment.” (*See* Tr. of July 1, 2022 Status Hrg., at 27:19-24, 28:1-5; *see also id.* at 23:25 – 24:2.) Ameren believes the Court’s discretion in this regard is potentially particularly important here in light of substantial ongoing uncertainties in the supply chain, described in a declaration Ameren previously submitted (*see* ECF #1213-4, June 1, 2022 Decl. of Benjamin Ford), and the increasing challenges to transmission system reliability faced by MISO, described in an earlier declaration provided by MISO (*see* ECF #1213-5, June 7, 2022 Decl. of Andrew Witmeier). These factors are significant and dynamic, and warrant recognition of the Court’s discretion to address changing circumstances if they arise. Ameren does not believe that Plaintiffs actually see things differently, so this a nuance that the Parties should be able to work through.

Operation of Rush Island for Reliability Purposes. The Parties also agree as to substance on principles that the expected operation of Rush Island for reliability purposes would be expected to follow prior to its retirement (items 2 and 3 of Ameren’s current draft proposal and items 2, 3, and 4 of Plaintiffs’ current draft proposal). The primary difference between the Parties’ respective proposals at this time is one of form, not substance. Ameren has structured its proposal to track what MISO has now stated it expects will be needed from Rush Island to ensure transmission system reliability, namely, in summary (from Ameren’s item 2):

- The units would be committed by MISO depending upon circumstances on the transmission system—in recognition that the system is dynamic with circumstances constantly in flux
- The units would be committed by MISO for reliability purposes, not based on economics—in other words, for the avoidance of doubt, while the units’ cost profile would trigger more operation in the normal course, the units would not be committed based on those normal-course economics and instead would be committed only for reliability purposes.
- The units would be committed by MISO based on forecasted conditions to address the reliability concerns identified by MISO in its Attachment Y Study Report.
- The units would be committed by MISO, as needed, in the event that MISO declares an emergency or determines the units are needed to respond to unstable conditions on the transmission system.
- The units would be committed by MISO, as needed, if winter conditions require freeze protection to maintain the units’ integrity and prevent damage from freezing temperatures so that the units continue to be available to provide reliability service.¹

¹ Ameren previously proposed capping SO₂ emissions as a means of limiting the Rush Island units’ operation in way that would provide both certainty and administrative flexibility and efficiency, and because MISO’s Standard Form System Support Resource (SSR) Agreement includes “maximum annual SO₂ emissions”—in other words, a cap—as a possible limitation. *See* MISO FERC Electric Tariff § 35.0.0, Attachment Y-1, Standard Form System Support Resource (SSR) Agreement, Section 1(H)(b). Plaintiffs, however, have made clear that they do not want, and will not agree to, an emissions-cap-based approach. Accordingly, in an effort to confer in good faith toward reaching an agreement, Ameren has not included an SO₂ emissions cap in its latest proposal, adopting instead the approach urged by Plaintiffs whereby the Rush Island units would be committed by MISO as needed to address the reliability issues identified by MISO.

Plaintiffs' proposal is different in that, rather than addressing reliability operations in one cohesive section, it first prohibits operations based on certain bright lines apparently intended to track reliability needs, but then separately carves out an exception for reliability operations described similarly to Ameren's proposal—a two-part structure that unnecessarily creates confusion and the potential for ambiguity. More specifically, Plaintiffs have structured a paragraph called "Operation Prohibitions" (their item 2) that draws certain bright lines prohibiting any operation in March, April, May, October, or November and prohibiting operation "beyond minimum load" during December, January, February, June, July, August, and September. Yet in the next paragraph of their proposal, called "Excepted Operations" (their item 3), Plaintiffs clarify that "[n]otwithstanding [the] Operation Prohibitions in Paragraph 2, Ameren may operate Rush Island" to address reliability issues described similarly to Ameren's proposal.² The resulting two-part structure does not track what MISO has said it needs for reliability purposes—and therefore could introduce unnecessary risk to system reliability—to the extent that the "Operations Prohibitions" introduce possible inconsistency and ambiguity, and therefore confusion, as to when and how MISO can commit the Rush Island units to address its reliability concerns. Ameren believes its proposal, which tracks what MISO has said, describes reliability operations more clearly without the potential problems of Plaintiffs' two-part structure. As noted above, Ameren acknowledges that Plaintiffs have not had Ameren's latest proposal or MISO's input until very recently, and Plaintiffs may need and want more time to consider the latest information. Because the Parties seem to be on, or very nearly on, the same page regarding the substance of reliability

² Plaintiffs' proposal does not include a provision for freeze protection, but Ameren understands from the Parties' discussions that Plaintiffs do not disagree that protecting the integrity of the units in freezing conditions is important so that the units continue to be available to provide reliability service. It may be that Plaintiffs do not believe that level of detail is needed in the order; in any event, this is certainly an issue the Parties can work through.

operations, the difference in the form of the Parties' respective proposals is likely something that can be resolved through further conferral.

The Parties agree that, subject to MISO's ongoing System Support Resource ("SSR") assessment, any SSR Agreement between MISO and Ameren regarding the continued operation of the Rush Island units would include protocols to limit use of the units to the load levels and conditions necessary to address the reliability concerns identified by MISO.³ (See Ameren's item 3 and Plaintiffs' item 4.)

Reporting and Production. The Parties have also found mostly common ground with respect to Ameren providing certain reporting and production (items 5, 6, and 7 of Ameren's current draft proposal and items 6 and 7 of Plaintiffs' current draft proposal). The Parties agree that, beginning January 15, 2023 and every three months thereafter until Rush Island retires, Ameren will file quarterly reports with the Court summarizing Ameren's efforts to implement any transmission projects necessary to address the reliability issues identified by MISO, any declarations of emergencies by MISO, and the amount of electricity generated and SO₂ emissions from the Rush Island units during the reporting period. The Parties also agree that Ameren will produce all communications between Ameren and MISO concerning MISO's Attachment Y study report and alternatives analysis, and any SSR agreement concerning Rush Island to be filed with FERC. The only disagreements in this area relate to Plaintiffs' request that reporting cover "revenues recovered by Ameren" and that production cover the overbroad and vague category of

³ During the July 1 status hearing, the Parties discussed with the Court the possibility of designating the Rush Island units as "use limited" resources. Since that hearing, however, MISO has informed Ameren that a "use limited" designation is not workable under MISO's Tariff. As a result, while that particular designation is not an option, the Parties' substantive conferral has focused on defining limited use of the units for reliability purposes, as reflected above, in the Parties' current respective draft proposed orders, and in MISO's input to date.

“all communications between Ameren and MISO concerning Rush Island’s retirement.” Those two points are discussed below as part of the remaining areas of disagreement that the Parties still need to work through.

Remaining Areas of Disagreement to Work Through

“Temporary” DSI. The primary remaining area of disagreement relates to Plaintiffs’ inclusion in their latest draft proposed order of a paragraph called “Emissions Controls” (their item 5), which would require Ameren, beginning December 1, 2022, to “implement a temporary Dry Sorbent Injection (“DSI”) system at Rush Island Units 1 and 2 whenever those units are in operation during the months of December, January, February, June, July, August, and September.” As a threshold matter, the Court’s existing remedy ruling contemplated plant operations until the end of March 2024 without requiring such “temporary” DSI controls (which Plaintiffs did not request at any prior point in the case), and the modification to the remedy ruling that Ameren seeks will result in lower operations—operations only for reliability and emergency purposes until the plant can fully retire—and therefore lower emissions than would otherwise occur under the existing remedy ruling, and then cessation of all emissions upon retirement. The requested modification of the remedy ruling will substantially reduce emissions without “temporary” DSI.

Moreover, as explained in the declaration of Christopher Stumpf, Ameren’s Senior Director – Project Management, Mechanical and Environmental Engineering, the document that Plaintiffs have cited (Trial Exhibit BP) regarding “temporary” DSI does not support use of a portable DSI system on a long-term, ongoing basis, and in fact such use would pose operational problems. (*See* Ex. 2, July 15, 2022 Decl. of Christopher A. Stumpf, P.E., PMP, at ¶¶ 4 – 10.) The DSI test from 2011 described in the document cited by Plaintiffs assessed removal of mercury and acid gases using DSI, not SO₂, and that testing was limited in other important ways: testing

was done for only half of the outlet gas path for a single unit for only 2 to 4 hours per day over a period of only 18 days, totaling fewer than 30 hours. (*Id.* at ¶ 6.) The DSI system did not operate at full capacity, and even at the lower capacity problems were identified, including issues getting reagents out of bulk storage at higher feed rates due to moisture content in the air, which would present a recurring complication, particularly in peak summer months. (*Id.* at ¶ 7.) Removal efficiency of 50%, as suggested in Plaintiffs’ proposal, would require even higher reagent feed rates, over longer periods of time, than were tested. (*Id.*) Material handling needs for a “temporary” DSI system also have not been studied, but those needs would be substantial—potentially requiring handling of in excess of 200 tons of reagent per day during the summer. (*Id.* at ¶ 8.) The feasibility of delivery of such a quantity of material, and the considerable truck traffic it would require, have not been studied. (*Id.*) Receiving and handling large quantities of material for DSI use requires unloading facilities, bulk storage silos, and permanent piping, none of which are part of a portable DSI unit. (*Id.* at ¶ 9.) Detailed planning and logistics, and addition of handling and storage facilities, would be required. (*Id.*) Moreover, since the 2011 testing, a dry ash handling system was installed at Rush Island and the feasibility of adding large quantities of DSI to that system has not been studied. (*Id.* at ¶ 8.) In sum, Ameren has no basis to know whether use of portable DSI systems on such a large scale for several months at a time would be either feasible or effective, whether 50% removal efficiencies could be achieved and maintained, and what unforeseen and unintended effects such operation could cause. (*Id.* at ¶ 10.)

The Parties have not had an opportunity to confer in detail regarding “temporary” DSI, and Ameren hopes that, as part of the Parties’ continuing overall efforts to confer in good faith to reach an agreement, Plaintiffs will take into account the practical points explained by Mr. Stumpf regarding portable DSI systems. In short, portable DSI is not a realistic option, and Ameren’s

requested modification of the remedy ruling already will substantially reduce emissions in the interim period leading up to retirement when reliability operation is needed, and will permanently eliminate all emissions upon retirement.

Reporting and Production Disagreements. The other area of disagreement, as noted above, relates to two specific parts of the reporting and production about which the Parties have been conferring. First, Plaintiffs have proposed that Ameren's reporting cover "revenues recovered by Ameren." Although the Parties' conferral continues, there has not yet been any explanation as to the potential relevancy of this request and, while the request is vague it would appear to require creation of a reporting mechanism that is outside of accounting requirements of both the Federal Energy Regulatory Commission ("FERC") and the Missouri Public Service Commission ("MPSC"). Furthermore, this request proposal disregards and oversimplifies how compensation works when units are designated as SSR. Compensation for the continued operations of the Rush Island units as SSR units would be addressed by the SSR Agreement and the MISO Tariff on file with FERC. Under the MISO Tariff, there are two forms of SSR compensation: Hourly and Monthly. Hourly compensation essentially reflects the marginal costs of operations whenever the SSR unit is dispatched to produce energy. The Monthly compensation component contributes to the unit's fixed costs and any other costs not picked up in the Hourly compensation. In addition to recovering undepreciated capital investment and a return on that investment, the MISO Tariff expressly provides that Monthly compensation should address costs related to operations and maintenance, labor, administrative, taxes, permit and licensing fees, site security expenses, insurance, and corporate overhead, among others.

An SSR unit owner must make a filing with FERC to establish the level of its Monthly cost compensation. Once that filing is made and the SSR revenue requirement established, MISO pays

the SSR unit that amount and collects it from customers in that portion of the MISO region deemed to benefit from the continued operation of the SSR unit. Ameren anticipates making such a FERC filing soon after MISO files any SSR Agreement with FERC. To ensure that this method of cost recovery does not result in over-recovery of what FERC deems to be a just and reasonable revenue requirement for SSR service, MISO will net out from SSR compensation any market revenues flowing to the SSR unit in the normal course of business. Stated another way, because SSR compensation is a form of cost-based rate recovery, while the market normally runs on market-based pricing, the netting process protects against double recovery. Because this process is governed by rules and processes of FERC and MISO, and because the request may also implicate MPSC procedures, including a separate financial reporting requirement as part of an order modifying the remedy ruling in this case is unnecessary and outside the scope of the claims and issues in this case. Nonetheless, Ameren will continue to confer with Plaintiffs regarding this narrow disagreement.

Second, Ameren does not agree with Plaintiffs' proposal that its production cover the overbroad and vague category of "all communications between Ameren and MISO concerning Rush Island's retirement." Ameren already has been producing to Plaintiffs, and has agreed to continue to produce, all communications between Ameren and MISO concerning MISO's Attachment Y study report and alternatives analysis, and any SSR agreement concerning Rush Island to be filed with FERC." These categories are specifically described and concrete, whereas anything "concerning Rush Island's retirement" is too vague and unbounded to provide Ameren with clarity and certainty as to what needs to be produced. Ameren will continue to confer with Plaintiffs regarding this issue.

Conclusion

In conclusion, the Parties have made progress in their good faith conferral even though there are many moving parts involved in the planning for Rush Island's retirement in order to ensure the reliability of the transmission system. Ameren has conveyed to Plaintiffs that it will continue to confer with them on these issues and Ameren understands that Plaintiffs also intend to continue the Parties' good faith conferral. But because the Court set a deadline for submission of proposed orders, Ameren includes as Exhibit 3 to this submission its latest draft proposed order, updated to reflect the information from MISO in Mr. Witmeier's declaration.

Dated: July 29, 2022

Respectfully submitted,

/s/ Matthew B. Mock

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CERTIFICATE OF SERVICE

I hereby certify that on July 29, 2022, I caused the foregoing document to be electronically filed with the Clerk of Court using the CM/ECF system, which will cause an electronic copy to be served on all counsel of record.

/s/ Matthew B. Mock

Matthew B. Mock

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

SIERRA CLUB,

Plaintiff-Intervenor,

v.

AMEREN MISSOURI,

Defendant.

Civil Action No. 4:11-cv-00077-RWS

DECLARATION OF ANDREW WITMEIER IN SUPPORT OF
AMEREN'S SUBMISSIONS TO MODIFY THE COURT'S
REMEDY RULING

I, Andrew Witmeier, am over 18 years of age and make the following declaration pursuant to 18 U.S.C. § 1746:

1. I am employed by the Midcontinent Independent System Operator, Inc. ("MISO") as Director Resource Utilization. In that role, my responsibilities include overseeing teams that manage MISO's Generator Interconnection Queue as well as assessing generator requests for surplus, replacement, and/or retirement. I spent the first 17 years of my career in various operator and manager positions within MISO Operations, including as a Reliability Coordinator and Manager Reliability Coordination of MISO's central region, which includes the Ameren footprint. I have been in my current role since January 2020. This Declaration is based on my personal knowledge and information available to me.

2. The Rush Island generating units are the subject of ongoing study to determine any transmission system reliability needs. MISO is responsible for studying all retirement requests for impacts on the transmission system from a security standpoint. MISO has identified multiple reliability constraints that require investigation and that may require the Rush Island generating units to remain online as a System Support Resource (“SSR”), as provided in MISO’s Tariff that has been approved by the Federal Energy Regulatory Commission (“FERC”). MISO’s Tariff provides in Section 38.2.7.c:

The Transmission Provider [i.e. MISO] shall complete the Attachment Y Alternatives Study within 26 weeks after receipt of an Attachment Y Notice, if the Attachment Y Notice provides only 26 weeks of advance notification, unless otherwise agreed to by the owner of the potential SSR Unit. If no alternative is identified as available by the Attachment Y Notice date to Suspend, then the Transmission Provider shall file the SSR Agreement with an effective date as of the Attachment Y Notice date to Suspend [i.e. September 1, 2022 for Rush Island].

3. The basis for MISO operation of Rush Island Units 1 & 2 would be for reliability purposes as those are identified by MISO. The expected operation, subject to MISO designating these units as SSR via a FERC filing and a subsequent approval by FERC, would be expected to follow the principles stated below:

- a. Operation would be subject to orders issued by the United States District Court for the Eastern District of Missouri in *United States v. Ameren Missouri*, No. 4:11-cv-00077-RWS.
- b. The Rush Island units would be committed concurrently, or interchangeably on a single unit basis, depending upon circumstances on the transmission system.
- c. MISO would not commit the Rush Island units solely based on economics (i.e. based on the cost of operation).
- d. MISO would commit the Rush Island units for reliability purposes:
 - i. The Rush Island Units would be committed to serve the reliability conditions identified in the final Rush Island Attachment Y Study Report

(such Report to be filed at FERC) based on such measures as forecasted weather and forecasted daily demand levels in the geographic areas for which the reliability service is intended as described in the Report.

- ii. The Rush Island Units would also be committed in the event MISO declares or forecasts an Energy Emergency or MISO determines that commitment of the Rush Island Units would respond to unstable conditions on the transmission system.
- e. If not already committed, MISO would also commit the Rush Island units for freeze protection (i.e. according to predetermined weather conditions) to maintain their integrity so that they continue to be available to provide reliability service.

Executed on:

7/28/2022



**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION**

UNITED STATES OF AMERICA,

Plaintiff,

SIERRA CLUB,

Plaintiff-Intervenor,

v.

AMEREN MISSOURI,

Defendant.

Civil Action No. 4:11-cv-00077-RWS

DECLARATION OF CHRISTOPHER A. STUMPF, P.E., PMP

I, Christopher A. Stumpf, am over 18 years of age and make the following declaration pursuant to 18 U.S.C. § 1746:

1. I have personal knowledge of the facts set forth in this Declaration, and if called as a witness, could testify competently about the facts within this Declaration.
2. I have worked at Ameren since 2005, and I currently hold the position of Senior Director – Project Management, Mechanical and Environmental Engineering. Before coming to Ameren, I worked as a mechanical engineer at the engineering firm Burns & McDonnell.
3. My responsibilities and those of my work group include planning and budgeting capital projects; preparing design and procurement specifications associated with such projects; preparing requests for proposal (RFP) to be let out for bids; evaluating bids and selection of vendors and supervising the construction of capital projects, including pollution control projects like dry sorbent injection (“DSI”) systems.

4. I understand that Plaintiffs have proposed that Ameren operate a “temporary” DSI system at both Rush Island units to achieve a 50% reduction in emissions of SO₂ on a rolling 30-day basis, and to do so during the period of time before Rush Island is permanently retired, a period which is likely to be more than 18 months in duration. I understand that Plaintiffs are basing their proposal on a test system employed as part of a 2011 DSI test (the “2011 Test”) supervised by The Shaw Group, an outside engineering consultancy.

5. I am familiar with the kinds of portable DSI systems used in such testing situations, and I have reviewed the report (Remedy Exhibit BP) generated by The Shaw Group as a result of the 2011 Test. Utilizing a portable DSI system on a long-term, ongoing basis, is likely to pose operational problems for Rush Island.

6. The 2011 Test was limited in scope, purpose and duration. It was intended to assess the effectiveness of DSI at Rush Island in terms of removing mercury and acid gases for compliance with the MATS standard, not for removal of SO₂. It also assessed any impacts DSI would have on other Rush Island systems. Only Rush Island Unit 1 was tested, and DSI was injected into only half of the outlet gas path. The 2011 Test was of short duration: it lasted only 18 days, and during those days, the DSI equipment was operated for only 2 to 4 hours per day. *See Ex. BP at 26-31.* Many of the test periods pertained to PAC injection, which is a different process than DSI and does not affect SO₂. The DSI test system was operated for fewer than 30 total hours of operation.

7. Because of the limited scope and duration of the 2011 Test, the DSI system did not operate at full capacity. Some problems were noted even at this lower capacity. For example, there were issues with getting the reagents out of the bulk storage at higher feed rates due to the moisture content in the air, a problem that would occur during the peak summer months. *See Ex.*

BP at 25. To achieve SO₂ removal efficiencies above 50%, which would be necessary to have some degree of operational margin to comply with a 50% minimum, reagent feed rates would need to be relatively high, in the range of 10,000-11,000 pounds per unit, per hour. *See Ex. BP at 66.* Neither Ameren nor The Shaw Group performed any tests to see how such temporary DSI systems would handle high feed rates when used on an entire unit (instead of the half unit utilized for the 2011 Test) or if used on both Rush Island units, over long periods of time.

8. Ameren also did not study the material handling needs of a “temporary” DSI system. Assuming a rate of 10,000 pounds (5 tons) of reagent per unit per hour, the plant could need in excess of 200 tons per day of reagent during summer operations. Additionally, since the 2011 Test, Rush Island has added a new dry ash handling system. No analysis has been made of the effects of adding DSI to the new ash handling system, and whether it would be feasible to add in potentially 200 tons per day of material. Nor has Ameren studied the feasibility of the delivery or removal of such large quantities of reagent with a temporary DSI installation, which would require considerable truck traffic.

9. With a permanent DSI system, the plant would install permanent materials handling facilities: unloading facilities to receive shipments of bulk reagent; bulk silos to store the large quantities of reagent necessary; and permanent piping to convey the reagent from silos to each unit. These facilities are not part of a temporary unit. Detailed logistics plans would be created to handle the additional truck traffic, routing, and storage needs. This planning was not necessary for a test project, and so was not assessed. Because temporary units are designed to handle much smaller amounts of reagent and for much shorter periods, they do not have the capability to handle such large volumes of reagent, without significant modification or additional facilities.

10. In sum, Ameren has no basis to know whether use of these kinds of “temporary” DSI systems on such a large scale would be either feasible or effective at Rush Island, and does not know whether 50% removal efficiencies could be achieved and maintained.

I declare that the foregoing is true and correct.

Executed on July 15, 2022



Christopher A. Stumpf

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION**

UNITED STATES OF AMERICA,

Plaintiff,

SIERRA CLUB,

Plaintiff-Intervenor,

v.

AMEREN MISSOURI,

Defendant.

Civil Action No. 4:11-cv-00077-RWS

[PROPOSED] ORDER

THE COURT ORDERS THAT:

1. **Retirement:** In lieu of installing FGD at Rush Island and subject to the other provisions of this Order, Ameren shall cease operation of Rush Island Units 1 and 2 (the Rush Island units”) as soon as possible and in any event no later than March 31, 2024 (hereinafter the “Compliance Date”). Unless such Compliance Date is extended by the Court, on or before the Compliance Date, Ameren shall submit a request to the Missouri Department of Natural Resources (“MDNR”) to withdraw Units 1 and 2 from the facility’s operating permit.

2. **Operation for Reliability Purposes:** Ameren may operate the Rush Island units pursuant to a System Support Resource (“SSR”) agreement so long as those operations are limited as follows:

- a. Operation of the Rush Island units must be subject to orders issued by this Court.
- b. The Rush Island units may be committed by MISO, whether concurrently or interchangeably on a single unit basis, to ensure system reliability depending upon circumstances of the grid.
- c. Because their cost profile is such that MISO would normally seek to dispatch the Rush Island units in the normal course of business, for the avoidance of doubt, the Rush Island units may not be committed by MISO based on economics.
- d. The Rush Island units may be committed by MISO to serve the reliability conditions identified in the Rush Island Attachment Y Study Report based on such measures as forecasted weather conditions and forecasted daily demand levels in the geographic areas for which the reliability service is intended as described in the Report.
- e. The Rush Island units may be committed by MISO, as needed, in the event that MISO declares an Energy Emergency or MISO determines that commitment of the Rush Island units would respond to unstable conditions on the transmission system.
- f. If not already committed, the Rush Island units may be committed by MISO, as needed, for freeze protection (i.e., according to predetermined weather conditions) to maintain their integrity so that they continue to be available to provide reliability service.

3. In developing any SSR Agreement between MISO and Ameren regarding the continued operation of the Rush Island units, Ameren shall work with MISO to establish protocols, consistent with this Order, to limit the use of each Rush Island Unit to the load levels and conditions necessary to address the reliability concerns identified by MISO. The Court may amend this Order or enter subsequent orders, at its discretion, based on the final terms of any SSR Agreement.

4. To the extent that certain transmission projects necessary to alleviate reliability concerns (“Transmission Projects”) must be designed and constructed before the Rush Island Units can be retired, Ameren shall work expeditiously to secure approval of the Transmission Projects by MISO and to design and procure the equipment necessary for the implementation of such Transmission Projects.

5. **Reporting and Production:** Beginning January 15, 2023 and every three months thereafter until the Compliance Date, Ameren shall file quarterly reports with the Court summarizing Ameren’s efforts to implement any Transmission Projects necessary to address the reliability issues identified by MISO; the text of, or a copy of, any MISO declarations of energy emergencies that lead to Rush Island operations; and the amount of electricity generated and SO₂ emitted by the Rush Island units in the previous three months.

6. Within fifteen (15) business days of entry of this Order, Ameren shall produce to Plaintiffs all communications between Ameren and MISO concerning MISO’s Attachment Y study report and alternatives analysis, and any SSR agreement concerning Rush Island to be filed with FERC. Ameren shall supplement this production in the event that there are subsequent communications related to these topics after the initial production.

7. To the extent such documents contain information designated by MISO as Critical Energy Infrastructure Information (CEII) relating to Ameren or any other entity, the Parties shall preserve the confidentiality of such documents pursuant to the confidentiality provisions of this Court's Stipulated Protective Order, as amended.

SO ORDERED THIS _____ DAY OF _____, 2022

RODNEY W. SIPPEL
UNITED STATES DISTRICT JUDGE

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

SIERRA CLUB,

Plaintiff-Intervenor,

v.

AMEREN MISSOURI,

Defendant.

Civil Action No. 4:11-cv-00077-RWS

PLAINTIFFS' NOTICE OF FILING: PROPOSED ORDER

United States submits the attached proposed order governing Rush Island's operations until retirement, pursuant to the Court's orders. *See* Doc. No. 1221, 1223. The United States has conferred with Plaintiff-Intervenor Sierra Club and represents that Sierra Club concurs in with this filing and proposed order.

On July 11, Ameren informed Plaintiffs that the framework Ameren had proposed at the July 1, 2022 hearing, to designate Rush Island as a "use-limited resource," was no longer an option and instead provided Plaintiffs with a proposed order implementing an alternate proposal. Since that time, the Parties have engaged in discussions on a proposed order, with Plaintiffs returning a markup of Ameren's proposal on July 13, and Ameren providing a new "contingent draft" proposal on July 27. Ameren is also separately engaged in discussions with MISO about how to implement the principles the Parties have identified for ensuring Rush Island's operations are limited, and

Plaintiffs understand those conversations with MISO remain ongoing. In light of the contingent nature of Ameren's proposal, lingering uncertainty owing to Ameren's ongoing discussions with MISO, and disagreements about the terms for future operations, the Parties have been unable to agree to a joint proposed Order.

Nevertheless, we believe the Parties have agreed in substance on three principles to guide Rush Island's interim operations until retirement:

1. Rush Island's operations will be limited as much as possible going forward;
2. Rush Island's operations will be governed by MISO determinations regarding the need to manage reliability concerns;
3. There will be transparency and reporting measures to keep Plaintiffs and the Court informed of operational decisions as well as progress on reliability projects.

The attached proposed motion is Plaintiffs' effort to capture those principles in a workable and enforceable order. Specifically, Paragraphs 1-4 and 6-7 are intended to put into effect the three principles noted above. However, because Ameren's own discussions with MISO remain ongoing, we expect Ameren will provide suggested edits—and reasons such edits are necessary—once its discussions with MISO on this front conclude.

In addition, Plaintiffs' proposal includes a requirement that Ameren implement mobile DSI pollution control technology during peak-month operations going forward to reduce the impact of its operations on public health. *See* Paragraph 5. Ameren presented evidence during the 2019 trial that such a system was feasible at Rush Island and could achieve about 50% reduction in SO₂. *See* Ameren Remedy Trial Ex. BP, at AM-REM-00196428, 196436 (describing schedule and configuration of temporary DSI system); May 23, 2019 Ameren Proposed Findings (ECF 1110), at 97, ¶ 364. As described in Ameren Exhibit BP, which was admitted during the remedy trial, this is not a full-scale or permanent DSI system like the one the Court had ordered at Labadie. Rather, it is

a mobile system designed to be operated on short-term basis, using temporary components and tractor trailers. If the Court allows Ameren to continue to operate the Rush Island power plant until the current March 2024 compliance date without the pollution controls mandated by the Clean Air Act, Plaintiffs respectfully suggest that Ameren should be required to minimize its sulfur dioxide emission in the interim through alternate technology such as a temporary DSI system, in light of the harm to public health caused by Rush Island's ongoing pollution. Ameren does not agree with the inclusion of such a requirement in this order.

We anticipate that the Parties will continue to confer on these issues to hone the proposed order and identify additional areas of agreement, if possible, before the hearing on August 17.

Dated: July 29, 2022

Respectfully Submitted,

TODD KIM
Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice

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CERTIFICATE OF SERVICE

I hereby certify that on July 29, 2022, I filed the foregoing with the Clerk of Court using the CM/ECF system, and served an electronic copy on counsel for Ameren and Sierra Club via e-mail.

/s/ Elias L. Quinn
ELIAS L. QUINN

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

SIERRA CLUB,

Plaintiff-Intervenor,

v.

AMEREN MISSOURI,

Defendant.

Civil Action No. 4:11-cv-00077-RWS

[PROPOSED] ORDER

THE COURT ORDERS THAT:

1. **Retirement:** In lieu of installing FGD at Rush Island and subject to the other provisions of this Order, Ameren shall cease operation of Rush Island Units 1 and 2 as soon as possible and in any event no later than March 30, 2024 (hereinafter the “Compliance Date”).

2. **Operation Prohibitions:** Beginning October 1, 2022, and continuing until Rush Island’s retirement:

a. Ameren shall not operate Rush Island Units 1 or 2 during the shoulder months of March, April, May, October, or November; and

b. Ameren shall not operate Rush Island Units 1 or 2 during December, January, February, June, July, August, and September beyond minimum load.

3. **Excepted Operations:** Notwithstanding this Court's Operation Prohibitions in Paragraph 2, Ameren may operate the Rush Island pursuant to a System Support Resource (SSR) agreement so long as those operations are limited as follows:

a. Because their cost profile is such that MISO would normally seek to dispatch Rush Island Units 1 and 2 in the normal course of business, for the avoidance of doubt, the Rush Island units may not be committed by MISO based on economics, but rather after all other reasonable options to address the reliability concerns that require Rush Island's SSR designation..

b. The Rush Island units may be committed by MISO to serve the reliability conditions identified in the Rush Island Attachment Y Study Report based on such measures as forecasted weather conditions and forecasted daily demand levels in the geographic areas for which the reliability service is intended as described in the Attachment Y Study Report.

c. The Rush Island units may be committed by MISO, as needed, in the event that MISO declares an energy emergency.

4. In developing any necessary SSR Agreement between MISO and Ameren regarding the continued operation of Rush Island Units 1 and 2, Ameren shall work with MISO to establish protocols to limit the use of each Rush Island Unit to the minimum amount necessary to address the reliability concerns that require the Units' SSR designation.

5. **Emissions Controls:** Beginning December 1, 2022, Ameren will implement a temporary Dry Sorbent Injection ("DSI") system at Rush Island Units 1 and 2 whenever those units are in operation during the months of December, January, February, June, July, August, and September. Such temporary DSI system shall be at least as effective as the temporary, mobile DSI system that Ameren demonstrated in 2011 could be set up at Rush Island in a matter of days using

temporary tractor-trailer systems, and which Ameren relied on at trial to demonstrate that Rush Island could achieve a 50% SO₂ removal efficiency. *See* Ameren Remedy Trial Ex. BP, at AM-REM-00196428, 196436 (describing schedule and configuration of temporary DSI system); May 23, 2019 Proposed Findings (ECF 1110), at 97, ¶ 364. Such temporary DSI system shall achieve an SO₂ removal efficiency of at least 50% on a 30-day rolling average basis, and Ameren shall not materially alter the average sulfur content of the coal compared to what is has been burning since this Court's September 2019 remedy order.

6. **Reporting:** Beginning January 15, 2023 and every three months thereafter until the Compliance Date, Ameren shall file quarterly reports with the Court recounting:

a. Ameren's efforts to expedite any projects necessary to address the reliability issues that warranted in MISO's SSR Designation of Rush Island Units 1 and 2;

b. All revenues recovered by Ameren for Rush Island operations during the previous three months. The revenue report shall distinguish between different sources of revenue, including payments for electricity sales and payments for reliability requirements;

c. The text of, or a copy of, any MISO declarations of energy emergencies that lead to Rush Island operations; and

d. A report of the amount of electricity generated and SO₂ generated by the Rush Island Units in the previous three months.

7. **MISO Communications.** Within fifteen (15) business days of entry of this Order, and on a monthly basis thereafter, Ameren shall produce to Plaintiffs all communications between Ameren and MISO concerning Rush Island's retirement, MISO's Attachment Y study report and alternatives analysis, and any SSR agreement concerning Rush Island. To the extent such documents contain information designated by MISO as Critical Energy Infrastructure Information (CEII) relating

to Ameren or any other entity, the Parties shall preserve the confidentiality of such documents pursuant to the confidentiality provisions of this Court's Stipulated Protective Order, as amended.

RODNEY W. SIPPEL
UNITED STATES DISTRICT JUDGE

So ORDERED this ____ day of _____, 2022.