

MEMORANDUM

To: Missouri Public Service Commission Official Case File,
Case No. EO-2019-0314

From: Geoff Marke, Chief Economist
Office of the Public Counsel

Subject: Notice of Deficiency to Ameren Missouri's IRP update

Date: June, 6th 2019

Summary

As presently submitted, Ameren Missouri's IRP is deficient in its modeling for potential costs and subsequent resource planning modifications associated with pending court ordered remedial actions for the Rush Island power plant (and potentially, the Labadie power plant¹). Ameren Missouri should be modeling scenarios related to Rush Island (and potentially, Labadie) based, in part, on the Company losing and exhausting its appeal process. Given the order of magnitude of potential non-compliance costs, based on Ameren Missouri's own projections, the absence of any alternative resource plan that attempts to consider scenarios regarding its litigated power plants is a clear deficiency and in non-compliance with the Commission's IRP rules.

Recommendations

Ameren Missouri should develop alternative resource plans that consider, at a minimum, a range of high, medium, low remedial cost scenarios related to Rush Island. For example, based on the aforementioned remedial recommendations proposed, costs could include variations of remedial retrofit scenarios including flue gas desulfurization equipment ("FGD" or "scrubbers") or dry sorbent injection equipment ("DSI"). The former (FGD) would represent a "high" cost scenario and the latter (DSI) a "med" cost scenario. A "low" cost scenario could reasonably be understood as Ameren Missouri's proposed remediation recommendation that past pollution should be offset by Ameren turning over "allowances" it won for emissions reductions elsewhere. It is important to note, that the inclusion of these scenarios should impact decisions and timing throughout the rest of Ameren Missouri's integrated resource planning. It's all interdependent.

The rest of this memorandum summarizes the deficiencies and recommends actions for Ameren Missouri to undertake in its future triennial IRP. OPC's recommendations will enable Ameren Missouri to fulfill the fundamental objective of resource planning of providing the public with energy services that are safe, reliable, and efficient; at just and reasonable rates; in compliance

¹ The Sierra Club has sought a Court-ordered injunction against Ameren Missouri's Labadie power plant that would require Ameren Missouri "to limit the emissions from Labadie going forward" in its proposed conclusions of law—remedy phase.

with all legal mandates; and in a manner that serves the public interest and is consistent with state energy and environmental policies.

Background

On April 12, 2019, Ameren Missouri ("the Company") filed its 2019 Integrated Resource Plan (IRP) Annual Update Report in File No. EO-2019-0314 pursuant to the requirements of 4 CSR 240-22.080(3)(B).

On April 25, 2019, OPC submitted questions to Ameren Missouri and stakeholders in response to the Company's filed 2019 IRP Annual Update (see GM-1). Including the following question:

Rush Island: A recent article in the St. Louis Post Dispatch stated that:

Either Ameren's failure to install pollution controls on its Rush Island coal-fired power plant near Festus caused the premature death of hundreds of people by releasing 160,000 tons of sulfur dioxide into the air, or the emissions had no measurable health impact and a remedy could cost each Ameren ratepayer at least \$1,345.²

Q. Does Ameren Missouri believe IRP-impacted scenarios should be modeled in which Ameren Missouri would have to provide remedial actions related to Rush Island? If not, why?

On April 30, 2019, Ameren Missouri hosted its 2019 IRP Annual Update workshop with its stakeholder group pursuant to 4 CSR 240-22.080(3).

On May 10th, 2019, Ameren Missouri filed its post-workshop summary report providing written responses to OPC's and other stakeholders' inquiries. In its report, Ameren Missouri indicated that it would not be making any changes to its Annual Report in response to the workshop. Including the following response to the aforementioned question posed regarding Rush Island:

Question: Does Ameren Missouri believe it should model scenarios in which Ameren Missouri would have to provide remedial actions related to Rush Island?

Answer: This litigation matter is still pending before the trial court. The parties are in the process of briefing the issues and no decision on remedy has been issued. In addition, the Company intends to appeal the court's decision when finalized. As part of that appeal, it would seek to stay any judgment issued by the trial court.

OPC is filing this memorandum pursuant to 4 CSR 240-22.080(5)(B) which states:

Within thirty (30) days of the last stakeholder group meeting pursuant to subsection (5)(A) of this rule, any stakeholder may provide the utility and other stakeholders with a written statement summarizing any potential deficiencies in or concerns with the utility's proposed

² Patrick, R. (2019) St. Louis judge holds fate of pollution controls at two area Ameren coal-fired power plants. *St. Louis Post-Dispatch*. April 15, 2019. https://www.stltoday.com/business/local/st-louis-judge-holds-fate-of-pollution-controls-at-two/article_10c1de51-828f-58f6-8103-b36a7e2ce7f9.html. See also GM-2

compliance with the electric resource planning rules. The utility has the opportunity to address the potential deficiencies or concerns identified by any stakeholder in its preparation of the triennial compliance filing.

Deficiency Rationale

The Commission's IRP rule, 4 CSR 240-22.010 (2)(C) states:

Explicitly identify and, where possible, quantitatively analyze any other considerations which are critical to meeting the fundamental objective of the resource planning process, but which may constrain or limit the minimization of the present worth of expected utility costs. . . . These considerations shall include, but are not necessarily limited to, mitigation of:

1. Risks associated with critical uncertain factors that will affect the actual costs associated with alternative resource plans;
2. Risks associated with the new or more stringent legal mandates that may be imposed at some point within the planning horizon; and
3. Rate increases associated with alternative resource plans.

Additionally, 4 CSR 240-22.060 (3)(C) states:

The utility shall include in its development of alternative resource plans the impact of—

1. The potential retirement or life extension of existing generating plants;
2. The addition of equipment and other retrofits on generation plants to meet environmental requirements;

As the remainder of this memorandum explains, the potential consequences of an unfavorable decision from the courts merits analysis of the impacts and exploration of potential mitigating factors in Ameren Missouri's resource planning analysis.

Rush Island Background

The U.S. Justice Department, on behalf of the U.S. Environmental Protection Agency (EPA), filed suit against the Ameren Missouri eight years ago. Officials with the federal agency alleged that, in 2007 and 2010, Ameren illegally installed boiler equipment at two units of its Rush Island Power Plant in Jefferson County without required permits. The EPA alleged that under the Clean Air Act, such modifications are considered new sources of air pollution, and should have been subject to stricter emissions limits.

The EPA requires power plants to obtain a "Prevention of Significant Deterioration" or PSD permit to prevent increases in air pollution from new sources, which the Rush Island plant did not. Such permits must be acquired before beginning construction on a major project. The EPA claimed that the new equipment enabled the facility to burn more coal and therefore emit more sulfur dioxide.

On January 23, 2017, the US District Court, Eastern District of Missouri found Ameren Missouri's Rush Island power plant to be in violation of the PSD regulations of the Clean Air Act's New Source Review Program.³

On May 23, 2019, parties filed their proposed findings of facts and conclusions of law to US District Judge Rodney Sippel. Responses to each other's filings will occur on June 23. Figure 1 contains Ameren Missouri's projected average annual, overall and per customer estimated costs associated with environmental compliance at Rush Island and Labadie. Compliance costs include the addition of flue gas desulfurization equipment ("FGD" or "scrubbers") or dry sorbent injection equipment ("DSI").

Figure 1: Ameren Missouri's average annual, overall and per customer estimated costs associated with environmental compliance at Rush Island and Labadie^{4,5}

Controls at Rush Island and Labadie			
Cumulative Cost to Customers Through Revenue Requirement			
	Average Annual Cost to Customers	Overall Cost to Customers	Per-Customer Cost
Rush Island FGD on 2 Units	\$125,500,000	\$2,509,800,000	\$2,077
Labadie FGD on 4 Units	\$214,700,000	\$4,294,100,000	\$3,554
Labadie DSI on 4 Units	\$70,700,000	\$1,625,300,000	\$1,345
Both Plants Combined	\$196,200,000 to \$340,200,000	\$4,135,100,000 to \$6,803,900,000	\$3,422 to \$5,630

Note: Sums of columns may not always match totals, due to rounding.

³U.S. v. Ameren Missouri, 4:11 CV 77 RWS (E.D. Mo.).

<https://www.moed.uscourts.gov/sites/moed/files/documents/news/Ameren-Memorandum-and-Order.pdf>

⁴ Ameren Missouri's proposed findings of fact—remedy phase Page 41.

⁵ Source listed in brief is as follows: "Slides 15 and 22; Celebi Report pp. 31-33 & Fi. 17; Celebi_EXP_0000023 (Fig 16, 17, 18, 28—RevReq & Rate Impact Model_FINAL.xlsx)"

Additional Pending Costs

As the Commission is well aware, Ameren Missouri is planning a large amount of plant investment in the near future. Ameren Missouri filed notice of its 5-year “Smart Energy Plan” which includes over \$5 billion in capital investment as seen in Figure 2.

Figure 1: Ameren Smart Energy Plan (SB 564 proposal) to the MO PSC Commissioners—
Agenda, February 20, 2019⁶

Smart Energy Plan 5YR Total Capital Overview (Thousands \$)						
A 5-year average of 37% of capital investments will go toward grid modernization						
	2019	2020	2021	2022	2023	Grand Total
Smart, Reliable Grid Operations	\$335,042	\$451,058	\$406,117	\$391,472	\$360,506	\$1,944,195
Smart Meter Program	\$30,034	\$54,870	\$51,966	\$55,995	\$52,117	\$244,982
Non-Nuclear Generation & Environmental	\$186,348	\$176,756	\$182,326	\$196,643	\$226,609	\$968,682
Nuclear Generation	\$74,684	\$65,896	\$61,411	\$76,451	\$73,984	\$352,426
Hydro Generation	\$34,825	\$33,627	\$43,395	\$33,499	\$14,955	\$160,301
Renewable & Gas Turbine Generation	\$11,948	\$21,782	\$20,104	\$25,732	\$19,339	\$98,905
Secure & Reliable Transmission	\$141,184	\$135,658	\$153,958	\$148,264	\$154,070	\$733,134
Cyber & Technology Upgrades	\$88,542	\$89,955	\$89,849	\$89,877	\$89,873	\$448,096
Operational & Customer Support Facilities	\$54,393	\$96,518	\$58,560	\$50,817	\$53,505	\$313,793
Innovative Opportunities	\$14,302	\$9,064	\$5,799	\$4,947	\$3,852	\$37,964
Grand Total - Capital	\$971,302	\$1,135,184	\$1,073,485	\$1,073,697	\$1,048,810	\$5,302,478
Wind Asset Acquisition (two sites)		\$1,000,000				\$1,000,000
Grand Total, Including Wind	\$971,302	\$2,135,184	\$1,073,485	\$1,073,697	\$1,048,810	\$6,302,478

Costs not included in the Smart Energy Plan include, but are not limited to:

- An additional \$1 billion for 550MW associated with two wind farm projects (Case Nos: EA-2018-0202 and EA-2019-0021);
- An as yet undetermined dollar amount for an additional wind farm of approximately 300 MW (Case No: EA-2019-0181);
- Over \$300 million (conservatively) in planned MEEIA investments over the next two-and-half years (Case No: EO-2018-0211);
- Potentially two additional utility-scale solar projects (Case Nos: EA-2019-0371 and EA-2019-0209);

⁶ Ameren Missouri’s proposed findings of fact—remedy phase Page 41.

- Future environmental costs associated with compliance for the Coal Ash Residual Rules including ash pond costs (closure) and landfill cell costs that will be in service after 2023; and
- The hundreds of millions of dollars in AMI technology that cannot be recovered through its Smart Energy Plan (Case No. EO-2019-0044).

If Ameren Missouri is already modeling billions in unplanned costs as a potential outcome in a case already decided before the Eastern District, surely such modeling is relevant for the Commission and stakeholders' consideration through the IRP process. It would also appear reasonable to assume that if those multi-billion dollar non-compliance costs materialize during Ameren Missouri's planning period, it would materially impact future planned investment and resource planning. The absence of such consideration in the IRP is a clear deficiency.

Conclusion

OPC agrees with Ameren Missouri in that the appeals process associated with Rush Island (and potentially Labadie) will likely continue well into the future. However, we do not believe the appeal process would reasonably extend beyond the IRP's planning period (20 years). Therefore, the potential impacts of an unfavorable decision needs to be considered in conjunction with Ameren Missouri's projected "Smart Energy Costs" and other planned capital expenditures.

That is, the Company should be transparent about its risk exposure and consider, at a minimum, future scenarios in which remedial costs are imposed on Ameren Missouri. No doubt, further "likely" outcomes can be modeled as the litigation process moves forward and the range of uncertainty over the fate of its current investments becomes more definitive. Finally, OPC wishes to make it clear that we are making no recommendation on the prudence of any action/inaction associated with historical environmental investments.