

PUBLIC VERSION

In re: Union Electric Company's)
2011 Utility Resource Filing pursuant) File No. EO-2011-0271
to 4 CSR 240 – Chapter 22.)

**REPLY TO AMEREN’S RESPONSE TO COMMENTS OF NRDC, SIERRA CLUB,
RENEW MISSOURI, MID-MISSOURI PEACEWORKS, AND GREAT RIVERS
ENVIRONMENTAL LAW CENTER**

The Natural Resources Defense Council, Sierra Club, Renew Missouri, Mid-Missouri Peaceworks, and Great Rivers Environmental Law Center (collectively, “NRDC”) hereby reply to Ameren’s response to our comments regarding Ameren’s 2011 Integrated Resource Plan (“IRP”). Finally, we reply to Ameren’s suggestions concerning the nature of the hearing to be held in this case.

We do not intend to waive any comments on which we have not specifically replied in this filing.

In our comments, we explained how Ameren did not comply with Missouri’s IRP Rules because the Company: (1) failed to evaluate demand-side resources on an “equivalent basis” with supply side resources, (2) failed to minimize present value worth or justify the alternative selection criteria that the Company used, (3) ignored the existing regulatory framework for energy efficiency, (4) engaged in a flawed analysis of retiring versus retrofitting the Meramec generating station, (5) failed to evaluate the cost effectiveness of continuing to operate Ameren’s other coal units, (6) assumed natural gas prices that Ameren acknowledged are inflated, (7) ignored the likely future cost of greenhouse gas (“GHG”) emissions, and (8) used outdated data that significantly underestimates the cost of constructing new nuclear power plants. As a result

of these omissions and shortcomings, Ameren's IRP is fundamentally flawed and fails to satisfy the state's IRP rules.

In response, Ameren largely ignores the specific errors we identified. Instead, the Company reiterates the analysis and conclusions set forth in its IRP, and attempts to dismiss the inadequacies identified by NRDC (and by other commenters) as just a series of minor disagreements over resource planning. Ameren does not, however, explain how its IRP purportedly satisfies the requirements of the IRP Rules. Instead, the Company belittles the IRP Rules themselves by setting forth an interpretation of those Rules that would make them virtually meaningless.

The Commission should reject Ameren's cramped reading of the IRP Rules, and instead acknowledge the important role that an adequate and public IRP process can play in ensuring that Ameren's resource planning leads to results that are in the best interests of Ameren's ratepayers.

I. Ameren's IRP Comes at a Time When the Company Should Be Making Crucial Decisions About the Future of its Power Generating Fleet.

Before addressing the general and specific responses offered by Ameren, it is important to note that this IRP process is occurring at a time when utilities throughout the country are at a crossroads. As Ameren acknowledges, there is a series of existing and pending environmental standards that will require the installation of modern pollution controls on virtually any coal unit that intends to continue operating for more than a couple more years. In addition, the aging units in the coal fleet will require increased levels of capital expenditures just to keep the units operating. Faced with the need to make such significant investments, numerous utilities throughout the country are evaluating whether to keep their existing coal units operating and, in many cases, are announcing their intent to retire such units. For example, a December 2010 survey of studies evaluating the amount of coal plant retirements found estimates ranging from

10 GW to 75 GW of coal capacity will be retired between now and 2020.¹ And, as listed in Exhibit B to these reply comments, more than 27.5 GW of coal plant retirements have already been announced by utilities throughout the country.

Unfortunately, Ameren appears to be trying to dodge the analysis of this issue and, instead to keep spending ratepayer money on its coal units without a compliant evaluation of whether keeping those units operating truly represents the lowest cost option for Ameren's ratepayers. For one thing, the Company provided an evaluation of the costs facing only one of its coal plants – Meramec. No analysis was provided of the cost effectiveness of continued operation of the Rush Island or Labadie plants even though, depending on the stringency of the environmental standards being promulgated, Ameren's own data shows that those plants could be facing the need to install \$800 million and \$1.7 billion in pollution controls, respectively,² and, presumably, tens of millions of dollars per year in other capital expenditures.

As for Meramec, the purported analysis put forth by Ameren is marred by omissions and flaws that render it entirely non-compliant with the IRP Rules, as we explained in our comments. While acknowledging one error – the use of inflated natural gas prices – Ameren seeks to dismiss the errors by contending that the IRP process represents nothing more than a “snapshot in time” and that any errors can be corrected in future filings. Yet at the same time, ** ** Unless Ameren wishes to hold off on making additional capital expenditures in its coal units, it must submit an IRP with a compliant evaluation of the cost effectiveness of continued operation versus retirement of each unit at Meramec, Rush Island, and Labadie.

II. Ameren's “Overarching Themes” Ignore the Requirements and Importance of Missouri's IRP Rules

¹ Exhibit A, Brattle Group, “Potential Coal Plant Retirements under Emerging Environmental Regulations.”

² Ameren IRP at Ch. 8 pp. 20, 23.

In its pleading, Ameren sets out several “overarching themes” it encourages the Commission to bear in mind during its deliberations about this proceeding. We address each theme herein.

A. Ameren’s IRP Need not be a “Perfect Plan,” but it Must Comply with the Rules.

Ameren’s pleading notes that the IRP rules are not designed to require as an outcome, “a ‘perfect’ plan with the perfect answer to every potential question.” Rather, Ameren states that the goal is to evaluate whether Ameren’s planning process meets the requirements of the rule.

We agree. Accordingly, our comments have identified specific instances in which Ameren’s analytical process falls far short of meeting the requirements set out in the rules. Our comments detail these deficiencies. In addition, Appendix A to the Joint Filing of the parties contains brief descriptions of dozens of deficiencies identified by Commission Staff, OPC, DNR and NRDC.

B. A Deficiency is more than a “Difference of Opinion,” but We Have Identified Numerous Omissions and Deficiencies in Ameren’s Filing.

As Ameren acknowledges, failure to undertake “some required analysis” constitutes a deficiency. The implication of Ameren’s second overarching theme is that the deficiencies identified by the intervenors amount to mere preferences, and that we are asking the Commission to require Ameren to file an IRP that has gained “100% agreement” among the parties.

To the contrary, we are asking the Commission to require an analysis that complies with the Commission’s planning rules, which were adopted in order to fulfill a critically important purpose. Ameren would have the Commission render those rules meaningless through a finding that Ameren has complied, despite having failed to use minimization of the present value of revenue requirement as the primary selection criterion, having failed to justify the use of

alternative criteria, having failed to consider demand side resources on an equivalent basis with supply side resources, and having used assumptions in its analysis that conflict with widely available information, at times conflicting with the company's own experts.

Ameren's implication that our comments amount to a series of differences of opinion is misleading. If the Commission finds that Ameren's plan is free of deficiencies despite the numerous deficiencies identified by the parties filing comments, then it is hard to imagine what, if anything, would ever constitute a deficiency.

C. Ameren's Contention that Additional Analysis Would Not Change the Result Ignores the Aggregate Impact of the Deficiencies and the Importance of the IRP Process.

Embedded within this third overarching theme are two troubling implications. First, Ameren suggests that any one deficiency is insufficiently significant to warrant a change in the analysis that would lead to the selection of a different Preferred Plan. However, it is the aggregate of the multiple deficiencies that should lead to an entirely different outcome, and one that is in the public interest. Certainly, we would urge the Commission not to accept Ameren's suggestion that it should consider the practical implications of each deficiency in isolation from the other deficiencies. Rather, we strongly believe that a new analysis in which each deficiency is addressed would lead to a different Preferred Plan selection, and one with dramatically improved outcomes for Ameren's customers.

The second implication is one that is woven throughout Ameren's response to the parties' comments, namely that, due to its concerns about the impact of DSM on shareholder value, Ameren has made a resource choice that no amount of IRP analysis is going to alter. While we acknowledge that the Commission cannot, under the IRP rules, require Ameren to adopt or implement a prescribed plan, this is no reason to allow Ameren to evade the planning rules. It is

our view that the rules set out planning criteria that should lead to the development of a resource portfolio that minimizes costs and maximizes reliability. In the hopefully unlikely event that, at the conclusion of such a planning process Ameren decides to ignore the outcome, the outcome would still have value to stakeholders in the context of prudency reviews and other proceedings before the Commission.

III. Ameren's Response to the Comments Does Not Overcome the Numerous Deficiencies Identified by the Parties.

A. Demand Side Management and Selection of the Preferred Plan

Ameren has provided extensive response comments to intervening parties. Unfortunately, it appears Ameren has provided very little if any new information in its response, nor made clear and cogent arguments as to why the parties' comments are not relevant or important. Rather, Ameren simply repeats its positions articulated in the IRP.

The fundamental concerns NRDC articulated with respect to demand side management (DSM) and Ameren's selection of its preferred plan essentially boil down to a few key issues:

- Ameren has not considered truly aggressive DSM resources;
- Ameren has not analyzed and considered DSM on an equal footing with supply-side resources; and
- Ameren began the IRP process with a preferred outcome of minimizing DSM because of inappropriate and premature regulatory concerns, and has used the IRP process to simply develop a complex set of criteria and scoring methodologies to attempt to justify that any DSM resources greater than its "low risk" scenario are not worth pursuing.

Unfortunately, Ameren's response sheds little light on these issues. Rather, it confirms the virtually unanimous conclusion of all intervening parties that Ameren has not performed an appropriate analysis of the resource options available and determined the least cost solution to providing Missouri ratepayers with energy services.

B. Ameren has not Considered Truly Aggressive DSM Resources

Several parties raised concerns in their comments about the analysis of the Maximum Achievable Potential Portfolio (MAP) and showed that it unduly constrains the potential estimate. These comments included that MAP does not represent "maximum achievable" because Ameren constrained the penetration rates by assuming no lower than a one year payback for any efficiency measure (as opposed to a typical 100% of incremental cost incentive provided by the utility), and assumes relatively low awareness and interest in DSM from customers. Other comments also criticized Ameren for not seriously considering a 2% per year DSM scenario as Ameren agreed to perform under a stipulation with DNR.

Regarding the 2% scenario, Ameren's response is that they did indeed analyze it, but they also make clear that the scenario was never taken seriously as a resource option because they had already chosen the preferred plan prior to conducting the analysis. Ameren's dismissiveness of the scenario is shown by its statement that, "While Ameren Missouri management had already selected the preferred resource plan...Ameren Missouri agreed to perform an integrated analysis of the 2% per year savings case."³ This admission is surprising, as it makes clear Ameren's result-driven approach and unwillingness to take potential DSM resources seriously. Ameren also argues that the 2% scenario is not achievable. While we disagree and believe a proper maximum achievable potential analysis would find it achievable and cost-effective, clearly, pursuing 2% per year during the next few years' DSM planning period (as opposed to the entire

³ Ameren Response Comments, p. 31.

IRP 20-year period) is achievable through more aggressive pursuit of time-discretionary retrofit opportunities.

Parties also criticized Ameren's unsubstantiated claim that MAP is not "realistic" and not a possible actual choice for Ameren. Again, Ameren simply repeats its circular and flawed logic that MAP is "not realistic" because the Realistic Achievable Potential Portfolio (RAP) is defined as "realistic."⁴ They support this by claiming that MAP simply represents a hypothetical ultimate upper bound of potential assuming everything is perfect in terms of delivery of programs, unconstrained financial incentives, and full awareness and interest by customers⁵

Clearly, simply naming RAP as the "realistic" option is not sufficient to eliminate MAP as "unrealistic." More disturbing is Ameren's contradictory position that on one hand MAP represents a hypothetical and not really achievable upper bound because it assumes a perfect world with the best possible customer interest and up-take, while at the same time admitting that it constrained MAP to penetrations assuming much less than optimal program designs, customer awareness and interest, and constrained financial incentives that would reduce participation.⁶ For example, by limiting potential utility rebates under MAP, the portfolio cannot be possibly defined as the hypothetical upper bound. The fact that MAP represents roughly only a quarter of the achievements other jurisdictions are already capturing in DSM shows Ameren did not seriously assess the maximum achievable potential, nor ever take MAP seriously as a real resource.

Another example of how the MAP and RAP analyses are flawed is that the estimates made by the analyses are projected out 20 years, but do not include emerging technologies despite the fact that Ameren does consider things such as carbon capture and sequestration on the

⁴ See, for example, Ameren Response Comments, p. 12.

⁵ See Ameren Response Comments, p. 12.

⁶ See, for example, Ameren Response Comments, pp. 30-32 and 35-40.

supply side. Ameren responds that it did include emerging technologies. However, they simply state this and then use as examples efficiency technologies that are all commercially available and cost-effective now, and promoted by many DSM programs. In fact, some of their examples have been mainstays of many DSM programs for years. Ameren could not even identify a single emerging technology that it analyzed.⁷

B. Ameren has not Analyzed and Considered DSM on Equal Footing with Supply-side Resources

NRDC argued that Ameren failed to consider DSM on an equal footing with supply-side resources. Ameren again asserts this is not true, and uses some examples such as valuing DSM based on avoided costs of supply to argue that it has been treated on equal footing. However, their answers do nothing more than confirm the assertion that DSM was relegated to a lower status. For example, Ameren states that it included all DSM resources, but RAP represented more DSM resources than are needed even with Meramec retirement, so Ameren constrained DSM resources based on the “need” for power.⁸

This statement confirms our contention. Ameren is clear that they first assumed all existing supply side resources would be used, except for Meramec’s potential retirement in 2016. In other words, they assume any plants already built have to be used, and do not let them compete on a cost basis with DSM. This is clearly unequal treatment when the evidence is clear that additional DSM resources from RAP or MAP could be captured that would be cheaper than running existing supply-side plants. Given that Ameren can always sell power into the market, or choose to idle a plant providing cost and environmental benefits, this unequal treatment fundamentally undermines the IRP analysis. Ameren’s statement that it “did not add additional

⁷ Ameren Response Comments, p. 36, Ameren cites LED lamps, heat pump water heaters, gravity film heat exchangers, ground coupled heat pumps, variable frequency motor drives, and smart strip plug controller as “emerging” measures it analyzed.

⁸ Ameren Response Comments, p. 11.

demand response or supply-side resources with the intent to exceed capacity needs and reduce revenue requirements” confirms that the company did not even attempt to model the lowest present value of revenue requirements (PVRR).⁹ Rather, Ameren simply looked at choices of PVRR after assuming all existing supply-side resources were fully utilized.

Ameren makes its position about not modeling the lowest PVRR abundantly clear in its response to Office of Public Counsel Deficiency 2 where it states that if it followed the philosophy of adding DSM resources that reduce PVRR irrespective of demand and reserve requirements, it would lead to investments in DSM that are not needed.¹⁰

Ameren has essentially stated that it has not and should not allow “equivalent treatment of both supply- and demand-side resources.” Its argument makes no sense, and is contrary to the purpose of IRP, which is to perform the analysis that determines the lowest cost combination of resources.

C. Ameren began the IRP process with a preferred outcome of minimizing DSM because of inappropriate and premature regulatory concerns, and has used the IRP process to simply develop a complex methodology, set of criteria, and scoring methods to justify that any DSM resources greater than its “low risk” scenario are not worth pursuing.

NRDC contends that Ameren biased the analysis from the start and, through a very complicated and unclear set of self-proclaimed criteria and scoring, somehow end up with a “preferred plan” that increases PVRR when the primary goal of the IRP is to minimize PVRR. While Ameren denies this numerous times, they also effectively admit it. Essentially, on every specific criticism of the scoring and scenario selection approach, Ameren relies on the argument that the individual criticism is moot because the preferred plan still would have been selected. While this may be technically correct, it is simply a result of Ameren using numerous

⁹ Id.

¹⁰ Ameren Response Comments, p. 30

assumptions and methods to collectively force the outcome of extremely limited DSM. Even if correcting any single one of these assumptions or methods would not be sufficient to change the outcome, these assumptions and methods taken as a whole are clearly inappropriate and would indeed change the outcome. Ameren goes even further to make clear that no other outcomes could ever have prevailed because they were trumped by regulatory concerns. For example, when NRDC criticized the scoring criteria for relegating minimization of PVRR to substantially less than half of the weighting, Ameren argues that it would have made no difference, and admits it had already decided against any aggressive DSM because of regulatory treatment concerns: “It should be noted that using the ‘at least 50%’ interpretations would not result in selection of a different alternative resource plan as the DSM cost recovery decision factor constitutes a constraint on minimizing PVRR in the eyes of the Company’s decision makers.”¹¹

Ameren made abundantly clear that only the preferred plan could prevail because Ameren’s view of the impossibility of achieving a satisfactory DSM cost recovery framework fundamentally eliminated all other options from contention.¹²

Thus, Ameren confirms NRDC’s main contention – that the IRP was result-driven from the start, and never allowed DSM to be taken seriously as a viable least cost resource for Missouri ratepayers.

Ameren also took it upon itself to impose the inappropriate criterion of regulatory treatment, which became the fundamental “central issue” limiting consideration of DSM resources.¹³ Rather than treating the IRP as an analytic exercise in determining the lowest PVRR opportunities for its ratepayers, Ameren has effectively elevated its shareholders to higher status than ratepayers as a stakeholder in the IRP. This undermines the purpose and intent of an IRP.

¹¹ Ameren Response Comments, p. 95.

¹² See Ameren Response Comments, pp. 13, 19-20, 97.

¹³ See Ameren Response Comments, p. 14.

While it may be true that issues of regulatory treatment need to be addressed in Missouri, this view of IRP as being the best solution for shareholders unfairly biases the IRP from the start. Ameren makes this elevation of shareholders to IRP stakeholders very clear by stating that “the phrase, ‘in a manner that serves the public interest,’ must be interpreted to include members of the public who, directly or indirectly, invest in the securities of the utility company with the promise of a fair return on their investment.”¹⁴ This definition of “public interest” turns traditional utility regulatory practice on its head.

An IRP is not a filing for approval of a specific DSM plan or certain regulatory treatment, but rather is supposed to be an objective analysis of options that minimize PVRR. Ameren admits this was not done, and for this reason alone the Commission should reject Ameren’s IRP.

D. Ameren Has Not Justified Failing to Provide an Analysis of the Cost Effectiveness of Continuing to Operate Versus Retiring the Units at Labadie and Rush Island.

As NRDC explained at pages 30–31 of their comments, Ameren’s IRP is deficient because the Company failed to provide an evaluation of retirement versus continued operation of Labadie and Rush Island coal units. Ameren responds that it was proper to evaluate only Meramec because that plant is the oldest, there have been discussions about retiring it, and Rush Island and Labadie have lower operating costs. (Ameren Resp. at pp. 43–44). Under Ameren’s theory, if the IRP showed that Meramec was not going to retire, then there would be no reason that Labadie or Rush Island would retire.

This response fails because Labadie and Rush Island are facing far higher costs under Ameren’s assumptions than Meramec is.¹⁵ The IRP concludes that Meramec would not retire

¹⁴ Ameren Response Comments, p. 19

¹⁵ It is important to emphasize that the plant costs identified in Figure 3.2 of Ameren’s response reflect only fuel and operating costs. They do not reflect the significant capital and environmental control costs that those units face.

only under a “moderate” environmental scenario in which Ameren would not need to install any major pollution controls on the plant. The IRP makes clear that:

If environmental regulations became significantly more aggressive than those in place today and would require significant capital investment in environmental retrofits at Meramec, then Meramec would be retired.

(IRP at Ch. 10 p. 16). Yet even under the “moderate” environmental scenario, Ameren acknowledges that a scrubber would need to be installed on Rush Island Units 1 and 2 in 2016, at Labadie Units 1 and 2 in 2020, and Labadie Units 3 and 4 in 2024. (IRP at Ch. 8 p. 20). The scrubber at Rush Island is estimated to cost \$620 million and to cause a 23 MW capacity reduction, while at Labadie the scrubbers would cost \$1.1 billion and cause a 46 MW capacity reduction. (IRP at Ch. 8 p. 23). Given that Rush Island and Labadie face far higher costs under either a “moderate” or an “aggressive” environmental scenario than Meramec would under the “moderate” scenario relied on by Ameren, the fact that Ameren concluded that Meramec would not retire under the Company’s preferred resource plan does not support the contention that Rush Island or Labadie should not be retired under that plan.

E. Ameren Has Not Justified Assuming an Operating Life For Meramec That Is Far In Excess of the Expected Operating Life Identified By Two Separate Consulting Firms Hired by Ameren.

As NRDC explained at pages 22–25 of their comments, Ameren unreasonably selected a preferred resource plan that assumes that the Meramec units would continue operating until 2042, at which time they would be 81 to 89 years old. Such ages are far in excess of ** **

Ameren offers a non-response on this issue. With regards to ** **

In short, the only technical evaluation of the life expectancy of Meramec identified a retirement age that is ** ** years before the age Ameren assumes in its IRP, and Ameren has identified no evidence supporting its decision to ignore that analysis. Plainly, an IRP that

assumes the continued operation of coal units well past the time when they would be expected to retire cannot be considered a compliant analysis.

F. Ameren Has Not Justified Using a 70% Capacity Factor For the Meramec Units When the Burns & McDonnell Study Assumed a 30% Capacity Factor.

As NRDC explained, Ameren's analysis of Meramec is also flawed because Ameren assumed in its modeling that Meramec would continue operating at around a 70% capacity factor through the plant's retirement, ** ** (NRDC Comments at 28-29). Ameren asserts that we erred in contending that Ameren's use of inconsistent capacity factors made the capital expenditures and operation and maintenance cost assumptions used by Ameren inaccurate. (Ameren Resp. at 48). But Ameren misinterprets our comment. In reality, Ameren's use of the 70% capacity factor when Ameren's study identified a 30% capacity factor is problematic because it assumes that far more electricity will be produced and revenue will be generated by the Meramec units than Ameren's own technical analysis has shown.

IV. The Need for Testimony

Ameren seeks an expedited hearing schedule and no prefiled testimony on the basis that the parties have already stated their positions in previous filings in this docket. We strongly disagree. We have had no opportunity to cross-examine Ameren's staff or experts on the many technical issues and assumptions made in this planning process. In addition, further factual development through prefiled testimony and cross-examination of witnesses is necessary in order for the Commission to be able to evaluate the complex and important issues facing Ameren and to make the factual findings necessary to ensure that an adequate IRP is carried out based on the record in this docket.

At this point in time, when so many critical resource decisions lie imminently before the company, it is very important to ensure integrity in the process and to thoroughly review the analytical process upon which those decisions are made.