BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

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

BRIEF 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") urge the Commission to reject Ameren Missouri's February 2011 IRP and October change in the preferred resource plan as fatally deficient under Chapter 22 in these respects:

- Ameren has not considered demand-side and supply-side resources on an equivalent basis;
- Ameren failed to justify departing from lowest long-run utility costs as the primary criterion in plan selection;
- Ameren severely understated the cost of continuing to operate its existing coal fleet, thus biasing the results against both demand-side and alternative supply-side options.

SUMMARY OF THE PLAN

Ameren's 2011 IRP, admitted at the hearing as Exhibit 1 (hearing transcript ("T.") 14), is a result-driven exercise that cuts Ameren's investment in the most cost-effective resource, to the detriment of the public interest. The preferred resource plan (PRP), designated as plan B1, had these components: the Meramec plant to operate "as is" throughout the 2011–2030 planning horizon and beyond with essentially no major environmental controls installed; combined-cycle

natural gas capacity added in 2029; and a "low risk" demand-side portfolio. (IRP Executive Summary (ES) p. 21; Chapter 10, p. 14) It budgets $20 million a year for energy efficiency (EE) with demand response (DR) programs starting in 2016 with an annual $10 million budget (IRP p. 10-16).

Ameren put forward two other demand-side portfolios of note: maximum achievable potential (MAP) and realistic achievable potential (RAP). RAP was based on "realistic" program implementation assumptions whereas MAP presumed "ideal" conditions (Exhibit 2NP, Ameren Response to comments, p. 12). Either of these would have eliminated any need for new supply-side resources (IRP p. 9-2) even if Meramec was retired (IRP 10-17, Ameren Exhibit 2NP, Response to Comments, p. 33).

Demand-side management (DSM)-only plans performed better on cost, measured as present value of revenue requirement (PVRR), than any supply-side options (IRP p. 9-7). Based on preliminary screening, the top plans were DSM-only (MAP and RAP) and nuclear (IRP p. 9-11). After risk analysis, RAP was the least-cost plan, with a PVRR $1.6 billion lower than the comparable "low-risk" DSM plan. (IRP p. 9-20). The RAP plan also had a higher Return on Equity ("ROE") for Ameren shareholders over the planning period (T. 197). However, because Ameren was not recovering "lost revenues" for its existing programs, it rejected this plan as too risky (IRP ES-16–17; Chapter 10.1.1; T. 60, 197) and as harming its shareholders (Exhibit 5, Surrebuttal testimony of Matt Michels, 12–5, 62).

After the conclusion of its rate case, in which the Commission instructed Ameren to resolve DSM cost recovery issues through a filing under the Missouri Energy Efficiency Investment Act (MEEIA), Ameren filed a Notification of Change in its PRP (Notification of Change, p. 1). The change slashes the DSM budget from a range of $18–43 million a year under

the PRP to $5 million for the first half of 2012 and $0 thereafter (Notification 2), raising PVRR by about $500 million (0.81%), expected value of levelized annual rates by 0.19%, and expected return on equity by 0.16% while cutting energy savings by 98% (Notification 3). Ameren's changed PRP has a PVRR that is $2.1 billion higher than a comparable plan using RAP.

Ameren states that the RAP DSM Plan R0 would be acceptable only if the utility gets "fair" treatment under MEEIA (Exhibit 3, Revised surrebuttal testimony of Warren Wood, p.8). If the results of the MEEIA filing were favorable, Ameren contends it would implement RAP in three-year increments (T. 107–8, 112). In the meantime, however, Ameren is virtually eliminating investment in the lowest cost option of DSM and continuing to spend tens of millions of dollars on capital investments in its aging coal-fired power plants without having in place a PRP that has as its primary goal the minimization of PVRR.

ARGUMENT

I. EQUIVALENT TREATMENT OF DEMAND-SIDE AND SUPPLY-SIDE RESOURCES

Under the old Chapter 22 in effect when this plan was filed (and under the new 22), the utility must "Consider and analyze demand-side…measures on an equivalent basis with supply-side alternatives…" 4 CSR 240-22.010(2)(A). "The modeling procedure shall treat supply-side and demand-side resources on a logically consistent and economically equivalent basis." 22.060(4)(D). In other words, Ameren was supposed to compare DSM not only to new supply-side resources, but also to existing supply side resources (4 CSR 240-22.040(1)). The evaluation of existing supply-side resources versus DSM is important because Ameren is projecting the

need to invest $3.3 billion just for pollution controls on its aging Labadie, Rush Island, and Meramec coal-fired units in order to keep operating those units.

a. Ameren used DSM for capacity needs only.

Had Ameren treated resources on an equivalent basis, energy efficiency resources would have been input into the models along with supply side resources and allowed to compete on cost. If demand-side resources were more cost-effective than supply-side, the model would have selected more DSM and less supply-side resources and, as a result, reduced PVRR.

Instead, Ameren based its DSM plans on capacity planning, thus subordinating them to the supply side and never comparing increased DSM to investments in existing supply-side units. Energy efficiency was inserted only to meet capacity needs (IRP 9-4; T. 239). This means that DSM resources were considered for further analysis only after supply side resources were identified and a capacity need was established.

"[D]emand response was included in alternative resource plans on an as-needed basis to meet capacity needs by shifting the timing only." (IRP 9-4) Demand response was added only to meet load and reserve requirements in plans in which Meramec was retired, starting with the date of retirement. In those plans without Meramec retirement, Ameren worked backwards from 2030 and added DR only as needed to meet load and reserve requirements (T. 240; Exhibit 2, Ameren Response to comments, p. 11). They did not add DR for its cost-effectiveness alone (T. 241–2)

Ameren added efficiency as a "build-up" of plans on top of existing generation resources and mandated renewables (Exhibit 2, p. 11). They first assumed all existing supply side resources would be used, except for Meramec's potential retirement in 2016. In other words, Ameren assumed that any plants already built had to be used, and did not let them compete on a cost basis with DSM. The statement that "Ameren Missouri did not add additional demand

response or supply-side resources with the intent to exceed capacity needs and reduce revenue requirements, if possible" (*id.*) confirms that the company did not even attempt to model the lowest present value of revenue requirements (PVRR). Ameren makes its position 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 be investing in "more DSM than it needs." (Exhibit 2NP, p. 30)

Ameren considers this equal treatment (T. 240), but it is not. All plans included upgrades to existing plants, including Meramec. (IRP p. 9-4). But retiring Meramec would avoid the need for upgrades and the capital expenditures, fuel and O&M costs that would be necessary to keep it running even without new environmental controls. The RAP DSM plan R0 has Meramec continuing "as is" (IRP chapter 9, Appen. A, p. 3; chapter 10, p. 11, Table 10-5). Given that RAP and MAP allow Meramec to be retired, this is unnecessary and illogical. Including plant upgrades and continuing to operate Meramec increases PVRR, disadvantages DSM plans, and fails to treat DSM and supply-side resources on an equivalent basis.

DSM can displace capacity needs. Therefore Ameren should allow DSM to freely compete with supply-side resources on price for the purposes of capacity planning, rather than assuming a fixed capacity need determined by the supply side.

b. Ameren subordinated DSM to its financial concerns.

Ameren also rejected "perfect ratemaking," as embodied in MIDAS modeling, when it came to strategy selection (IRP p. 9-25) because it did not reflect "regulatory lag" (T. 198). To capture regulatory lag, the company assumed a two-year rate case cycle with historic test year lag resulting in "18 months of overall regulatory lag" (IRP chapter 10, pp. 2–3). This violates 4 CSR 240-22.060(4)(B):

> "The modeling procedure shall be based on the assumption that rates will be adjusted annually, in a manner that is consistent with Missouri law. This provision does not imply any requirement for the utility to file actual rate cases or for the commission to accord any particular ratemaking treatment to actual costs incurred by the utility."

Ameren's goal in assuming a two-year rate case cycle was to disqualify RAP (IRP 10-3–10-7) even though it performed best on PVRR (IRP 9-7) and on their preliminary scorecard as a whole (IRP 9-11). Since supply-side investments are also inherently subject to lag under traditional ratemaking, this is not equal treatment.

DSM-only portfolios (MAP and RAP) also performed best by the measure of present value of free cash flow (IRP 9-8). This is in the company's favor, but Ameren subordinated all other factors to its cost-recovery concerns. It designed the Low Risk Portfolio, which found its way into the PRP, not because it was a good DSM plan but "based on the continuation of the current regulatory framework" (IRP 9-11). RAP even yielded the company a higher return on equity (ROE) than Low-Risk, but again uncertainty about cost-recovery prevailed (T. 197).

The IRP process is about assigning probabilities to critical uncertain factors and analyzing them quantitatively as future risks. 4 CSR 240-22.070(2). Instead of analyzing alternative cost-recovery mechanisms, Ameren rejected not only MAP but the RAP Plan R(0) as "less attractive given the constraints of current state policies and regulations" (IRP 10-14). It simply assumed that it would not get lost revenue recovery (T. 77).

The current regulatory framework at the time of IRP filing was a regulatory asset with 6-year amortization. After the MEEIA rules went into effect, Ameren changed its PRP. In doing so it gave even shorter shrift to the rule's requirement for equivalent treatment and selected a plan with less DSM and higher PVRR.

c. By rejecting MAP Ameren failed to give full equivalent treatment to DSM.

Ameren's unequal treatment extends to MAP. Even though MAP outperformed even RAP for cost-effectiveness under the total resource cost (TRC) test (IRP, p. ES-20), Ameren maintained that "maximum achievable potential" wasn't really achievable. It eliminated MAP as an unattainable "ideal" (Exhibit 2NP, p. 12).

But Ameren witness Voytas testified that MAP is not defined by impossible conditions like an infinite budget; instead it is the best practices of the leading states (T. 120–1). This is not utopian, but Ameren rejected MAP because Missouri lacks the "ideal" attributes for MAP energy savings goals to be achieved (Exhibit 4, Voytas surrebuttal, pp. 5, 6–7).

MAP "should consider the maximum amount of DSM resources that could be captured with *100% incentives* (in other words an immediate customer payback), to determine if they offer ratepayers lower cost solutions to paying 100% of supply-side costs" (Exhibit 35, NRDC Attachment 1, pp. 2–3). Rather than push the envelope of cost-effectiveness for a comparison to supply-side costs, Ameren constrained MAP to a one-year, rather than instantaneous, payback, and to a 70% customer participation rate (*Id.* at 3, 5). In the process it constrained RAP as well, to a three-year payback and artificially low participation rates (*Id.* at 2, 3–4). This resulted in low estimates of potential compared to other Midwestern potential studies (*Id.* at 6–7). In response to these criticisms, Ameren continued to insist that MAP represented a "hypothetical, ideal world" (Exhibit 2NP 39) and that MAP was eliminated after preliminary screening because, "By definition, RAP is the most realistic achievable potential and therefore it is logical to conclude that RAP should continue to represent an aggressive DSM-only resource plan" (Exhibit 2NP, 12). Such circular reasoning does not excuse Ameren's failure to establish MAP and RAP in ways that would be most cost-effective for ratepayers.

II. LOWEST LONG-RUN UTILITY COSTS WERE NOT THE PRIMARY CRITERION

The utility is required to: "Use minimization of the present worth of long-run utility costs as the primary selection criterion in choosing the preferred resource plan." 4 CSR 240-22.010(2)(B). As Ameren admits, its PRP did not meet this criterion, as measured by PVRR, and its changed PRP is even worse. In particular, the PVRR for the original PRP was $1.6 billion higher than the PVRR for the comparable plan using RAP rather than "low-risk" DSM, while the PVRR for the changed PRP was $2.1 billion higher.

Ameren purported to assign PVRR a 25% weight in screening candidate plans and 30% weight in final plan selection, although this 30% was subjective (T. 148–51, 46, 58, 163). But the record shows that avoiding lost revenue from DSM programs was the primary factor that Ameren used in selecting its PRP. Ameren made it very clear that they would consider RAP DSM only if they got what they considered a fair demand-side investment mechanism under MEEIA (Exhibit 3, 8–9; T. 64–5, 107–8, 112). Selection of both the PRP and the changed plan was driven by lost revenue (T. 217-8). At the hearing, Ameren witnesses testified that they never balanced the level of PVRR reduction from RAP to the level of lost revenue from that plan. (T. 193-197). Instead, they acknowledged that even if minimization of PVRR had outweighed lost revenue by a factor of 10, Ameren still would not have included RAP in the PRP (T. 60–1), and they could not identify any level of PVRR reduction that Ameren would have found to outweigh lost revenue from DSM (T. 195). In other words, Ameren used avoiding lost revenues as the factor for selecting "low-risk" DSM over RAP instead of following its legal duty

to "use minimization of the present worth of long-run utility costs as the primary selection criterion in choosing the preferred resource plan." 4 CSR 240-22.010(2)(B).

Even if Ameren had not ultimately allowed avoiding lost revenues to effectively eliminate PVRR reduction from selection of the PRP, the 25–30% weight purportedly given to minimizing PVRR does not qualify as making such minimization "the primary selection criteria." Ameren witness Wood testified that PVRR was "a" primary criterion (Exhibit 3, Wood revised surrebuttal, p. 11). There can be only one "primary" criterion. Under the rule utility cost is "the" primary criterion, which means that factor must have a weight over 50% in the selection process. Instead, Ameren contends that a factor is "primary" if it is given more weight than any other single factor. But this theory allows minimization of PVRR to be sidelined simply by adding more decision factors. For example, if there had been 10 selection criteria and PVRR got the most weight with 11%, it still would have been primary according to Ameren (T. 62–3).

Disregard for PVRR is also shown by a lack of rigor in Ameren's analysis. Ameren did no straight-up comparison of lost revenue and PVRR (T. 193–4). They did no financial analysis of performance incentives for DSM (IRP 10-7). They used the lost revenue figures from their existing DSM programs (T. 60, 195). They did not know what lost revenues would be for RAP compared to Low-Risk (T. 58, 129). The company did model the sensitivity of earnings to lost revenue between RAP and Low Risk (IRP p. 10-5; T. 162, 218–9). This led to management's decision, in assessing the tradeoffs between PVRR and other consideration under 4 CSR 240-22.010)2)(C), to include in the PRP a portfolio that minimized lost revenues (T. 216–9)

Over the long run, RAP had a higher ROE than Low Risk (T. 196–7) and lower PVRR by $1.6 billion (T. 57, 195), but there was no amount of lost revenue the company would accept that would make it opt for the lower PVRR portfolio (T. 194–5, 60).

This was done under the current regulatory framework, which Ameren found could lead to an unacceptably large regulatory asset, upwards of $600 million (T. 163). In changing its PRP under the MEEIA regime, Ameren provided no coherent explanation, based on fact or law, as to why it could not expect a satisfactory demand-side investment mechanism (T. 75–7; Notification of Change). The record justifies Staff witness Rogers' assessment that Ameren "has not identified, quantitatively analyzed and assessed the impact on earnings and on PVRR for a 'fair' Commission-approved DSIM for its RAP DSM plan" (Exhibit 17, Rogers surrebuttal, p. 10).

Therefore, even assuming, contrary to the Chapter 22 regulations, that the utility can completely set aside PVRR as the primary criterion in selecting a preferred plan, Ameren has not satisfied the requirements of 4 CSR 240-22.010(2)(C) that it must "Explicitly identify and, where possible, quantitatively analyze any other considerations;" and "document the process and rationale used by decision makers to assess the tradeoffs and determine the appropriate balance between minimization of expected utility costs and these other considerations…" Ameren's decision was wholly subjective and elevated the interests of shareholders above those of the public, contrary to the fundamental purpose of resource planning, "to ensure that the public interest is adequately served." 4 CSR 240-22.010(1).

IIa. Shareholder interest is not part of the public interest.

Ameren tried to get around the need to prioritize reducing PVRR by arguing that its shareholders' interest is part of the public interest (Exhibit 3, Wood revised surrebuttal, pp. 5–6, 12–3). But the two interests are distinct and competing.

MEEIA requires the Commission to align the interests of shareholders and customers. Ameren assumes that the Commission will not fulfill this duty.

The Commission's duty to shareholders is to allow them a just and reasonable rate of return on their investment. At the same time, the Commission must protect consumers against the natural monopoly power that utilities would exercise in the absence of regulation. Hurricane Deck Holding Co. v. PSC, 289 S.W.3d 260, 268 (Mo.App. WD 2008); State ex rel. Laclede Gas Co. v. PSC, 600 S.W.2d 222, 226 (Mo.App. WD 1980).

The public interest that the Commission protects is that of ratepayers, State ex rel. Capital City Water Co. v. PSC, 850 S.W.2d 903, 911 (Mo.App. WD 1993); or, to put it another way, "the consuming public." Laclede Gas, 600 S.W.2d at 226. That is the Commission's principal purpose. PSC v. Oneok, Inc., 318 S.W.3d 134, 137–8 (Mo.App. WD 2010).

Ameren witnesses could not say what portion of their shareholders are also Ameren Missouri ratepayers or Missouri residents (T. 66, 101). However many that may be, their interest as customers is separate from their interest as shareholders. In Chapter 22 ratepayers are protected by the primacy of lowest PVRR. Ameren has not justified a departure from that metric, and it cannot subvert the primary criterion by infiltrating the public interest with the private interest of stockholders.

In changing its preferred plan, Ameren asserted even more forcefully the paramount interest of its shareholders. But the MEEIA rules were now in effect. MEEIA, like Chapter 22, declares the "policy of the state to value demand-side investments equal with traditional investments in supply and delivery infrastructure". Section 393.1075.3, RSMo. And it further requires the commission to: "Ensure that utility financial incentives are aligned with helping customers use energy more efficiently and in a manner that sustains or enhances utility customers' incentives to use energy more efficiently;" § 393.1075.3(2).

HC

The utility's financial interest and its customers' interest are not only distinct but must be aligned. This is not done by exalting shareholders' interest. Increasing PVRR for customers in order to avoid "lost revenues" for shareholders reduces rather than enhances customers' incentives by reducing their opportunities to see lower bills as a result of participating in utility efficiency programs.

Ameren is not justified in seeking more than a proper alignment of interests, nor in assuming that it will not get fair treatment from the Commission under MEEIA.

III. Ameren failed to analyze rising supply-side costs.

Ameren's IRP utterly fails as a planning exercise because it assumes essentially no changes in supply-side costs. There will be no new environmental compliance costs, and Meramec will continue to operate as is. The filing is fatally deficient for two basic reasons:

- Ameren has not analyzed supply-side options it can "reasonably expect to develop and implement;" 4 CSR 240-22.040(1); and
- By drastically understating supply-side costs it has disadvantaged DSM and so failed to give equivalent treatment to demand-side and supply-side resources.

a. Ameren failed to reasonably analyze the life expectancy and costs of continuing to operate the Meramec plant.

Ameren has Meramec operating throughout the 2011–2030 planning horizon. In 2030 units 1 and 2 will be 77 years old. According to the Black & Veatch "Report on Life Expectancy of Coal-fired Power Plants" (Exhibit 40HC; T. 179–80), **_____ _____.** (In camera T. 8) _____**

HC

_____(Exhibit 29HC, Schlissel rebuttal, p. 5). Ameren actually has Meramec operating through 2039, and while it explained that it extended its analysis through 2039 only to capture the "end effects" of decisions made through 2030, it nonetheless has Meramec producing revenue through 2039. (T. 174–76). The assumption in the IRP that Meramec will continue operating until it is well over 80 years old is simply unrealistic and arbitrary.

Ameren assumed that Meramec would continue to operate at a 60% capacity factor (T. 184–5), or at 70% as a baseload plant until 2021 or 2025, after which it would cycle on and off at a 30% capacity factor (Exhibit 2NP, p.48). **_____

_____

_____

_____** (In camera T. 11–12)

History thus suggests that the capital expenditure budget Ameren assumed for Meramec (Exhibit 2NP, 47) is too optimistic. This is important because the status of Meramec, and no other existing plant, was an attribute of all alternative resource plans (IRP 9-2). The Meramec scenarios were: to operate as is (the preferred plan), to retire in 2015 or retire in 2022. Even 2015 is beyond the life expectancy of a coal-fired plant. Ameren has not reasonably analyzed the refurbishment of its existing plants as required by 4 CSR 240-22.040(1).

b. **Ameren unreasonably failed to consider the cost of environmental retrofits for Labadie or Rush Island.**

Ameren concluded that the cost of plans went up the sooner Meramec retired (IRP 9-11), and that Meramec would retire in 2016 only in an aggressive environmental scenario (IRP 9-22). **_____

_____.** (In camera T. 4–5) Yet the PRP assumes that

HC

Meramec would not be scrubbed. In other words, Ameren analyzed the cost of environmental retrofits only for the one plant it has no intention of retrofitting.

The cost of scrubbing Labadie would be $1.1 billion; total environmental costs under the aggressive scenario would be $1.75 billion (T. 165–6). The cost of moderate controls on Rush Island would be $642 million; for the aggressive scenario $784 million (T. 166). For Meramec under the aggressive environmental scenario the cost would be $800 million (T. 166–7); Meramec would not be controlled otherwise (T. 177). Since the cost of controlling Labadie and Rush Island under "aggressive" regulations (about $2.5 billion) would be more than three times the cost for Meramec, it was unreasonable to use Meramec as the test case for "enhancement of the emission controls at existing…generating plants," 4 CSR 240-22.040(1).

**_____

_____** (In camera T. 4) This is another failure to give equivalent treatment to demand-side and supply-side options. If Ameren intends not only to run those plants but to retrofit them at great expense, DSM becomes even more overwhelmingly cost-effective, and there is no conceivable excuse for not making DSM the preferred plan.

c. **Ameren's high natural gas price assumptions invalidate the plan.**

Ameren admits its natural gas price assumptions are too high (they asserted that gas costs twice as much as coal (IRP ES-9)) and promises to fix this deficiency in its annual update (T. 199–200). This remedy is unacceptable because the unrealistic assumptions have fatally infected the IRP. Ameren plans to continue spending tens to hundreds of millions of dollars on its Meramec, Rush Island, and Labadie coal-fired generating units before engaging in an accurate evaluation of whether the continued operation of each such unit will minimize PVRR in

comparison to retiring some or all of those units and replacing them with increased DSM, renewable resources, and natural gas combined cycle generation.

Lower gas prices would make Meramec relatively more expensive to run and thus favor retirement, barring reduced environmental regulations (T. 200–1). Lower gas prices would also make combined-cycle gas plants "even more competitive" (T. 189), particularly if Ameren were to compare the cost of converting simple-cycle gas to combined cycle with the cost of controlling Labadie and Rush Island (T. 189–91).

CONCLUSION

For all of the foregoing reasons, the Commission should declare Ameren's IRP non-compliant with Chapter 22 in its entirety.

/s/ Henry B. Robertson
Henry B. Robertson (Mo. Bar No. 29502)
Great Rivers Environmental Law Center
705 Olive Street, Suite 614
St. Louis, Missouri 63101
(314) 231-4181
(314) 231-4184
hrobertson@greatriverslaw.org

CERTIFICATE OF SERVICE

I hereby certify that a true and correct PDF version of the foregoing was filed on EFIS and sent by email on this 20th day of January, 2012, to all counsel of record.

/s/ Henry B. Robertson
Henry B. Robertson