BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company	)	
d/b/a Ameren Missouri's Tariffs to Increase	)	File No. ER-2012-0166
Its Annual Revenues for Electric Service.	)	

POST-HEARING BRIEF OF NATURAL RESOURCES DEFENSE COUNCIL, RENEW MISSOURI AND SIERRA CLUB

Come now the Natural Resources Defense Council, Renew Missouri and Sierra Club and submit this brief on the rate design issues of customer charges and declining block rates.

Introduction

In this case, Ameren Missouri ("Ameren") has proposed to increase the fixed billing cycle customer charge for residential and small general service (non-demand-metered) customer classes. For residential customers, the proposed increase is from $8 to $12 per billing cycle, a 50 percent increase. For small general service customers, the proposed increase is from $9.74 to $14.91 per billing cycle for single phase service and from $19.49 to $29.24 per billing cycle for three phase service. (Exhibit 36, Direct testimony of Wilbon Cooper, pp. 21–2) This is equivalent to a 53 percent increase for single phase service and a 50 percent increase for three phase service.

NRDC urges the Commission to reject Ameren's request to increase the fixed customer charges for its residential and small general service classes for three reasons. First and most importantly, any increase in reliance on fixed charges to recover authorized utility revenues discourages customers from investing in energy efficiency measures. Therefore this increase in

fixed charges is inconsistent with Missouri's policy objective of capturing the potential for energy savings. Second, the proposed rate design contravenes the established rate-making practice to strongly consider the importance of price signals to influence customer behavior. And finally, Ameren has demonstrated no compelling need for the shift to higher fixed charges.

Much of Ameren's defense of this change rests on a quantitative analysis that purports to demonstrate that the change from the current fixed charge to the proposed charge has a relatively small impact. Ameren witness Bill Davis characterizes his calculation of increase in the weighted average payback of all of the residential end-use measures included in the company's energy efficiency programs as "negligible." (Exhibit 40, Davis Surrebuttal Testimony at 3). However, he does not dispute that it is, in fact, an increase. We submit that the size of this adjustment and the magnitude of its impact is not the relevant factor in determining the outcome of this case. After all, if this adjustment is approved, another small adjustment, and another small adjustment in the same direction could easily follow, each of which, alone, might have what Ameren views as a "negligible" impact on customers. Clearly this could, by increments, add up to a major barrier for customers to reap the rewards of energy efficiency investments. Ameren provides no evidence that this adjustment is needed for revenue stability, nor does it refute the claim that higher fixed charges will lengthen the time for customers to recover the upfront costs of an efficiency investment. We therefore urge the Commission to reject Ameren's proposed increase in fixed charges.

In addition, we urge the Commission to undertake a process to investigate rate design options in collaboration with utilities and other stakeholders. This process could help the

Commission make rate design decisions that will lead to the best outcomes for customers and utilities alike.

Argument

A. The Commission Should Reject Ameren's Proposed Rate Design Change.

1. Increased Reliance on Fixed Charges Reduces Customer Benefits from Efficiency.

The most important reason for denying this rate design change is that its effects are directly at odds with achieving the state's admirable policy goal of capturing the benefits of energy efficiency measures. The 2009 Missouri Energy Efficiency Investment Act (MEEIA) sets a statutory goal for electric utilities of "achieving *all* cost-effective demand-side savings." § 393.1075.4, RSMo (emphasis added).

This summer the Commission approved Ameren Missouri's first-ever energy efficiency plan under MEEIA, which was adopted after unanimous agreement among stakeholders including NRDC. EO-2012-0142. The energy efficiency plan takes important steps to align the interests of the utility and its customers by providing significant new incentives that enable Ameren Missouri to achieve energy savings benefits on the order of $350 million, the majority of which will accrue to bill payers. Ameren secured a lost revenue recovery mechanism that ensured that all of its fixed costs will be recovered. ("Throughput Disincentive-Net Shared Benefits," stipulation in EO-2012-0142, pp. 3–4, 5, 8–11) This ensures revenue stability forAmeren.

Having spent the better part of a year working to reduce hurdles to energy efficiency on the utility side of the ledger, Ameren now asks the Commission to disregard the impact of rate design on customer participation in and benefit from energy efficiency investments. Instead of

proposing a rate design that most enhances its ability to meet or exceed its energy saving goals, which might include lower fixed charges or a move away from declining block rates, Ameren seeks to increase the barriers to efficiency on the customer side of the ledger.

Increasing the fixed charge entails decreasing the volumetric rate in order to recover the same revenue requirement (Exhibit 39, Davis Rebuttal, p. 13, lines 8–9); this undercuts the customer incentive to make efficiency improvements because efficiency improvements reduce the variable charge on the utility bill and have no effect on fixed charges. Higher fixed charges mean that the customer who implements efficiency improvements will see less noticeable reductions on her utility bill. As witness Pamela Morgan explained in her rebuttal testimony, seeing the regular savings on the utility bills is "an important financial and psychological benefit to customers" who implement efficiency improvements. (Exhibit 650, Morgan, at 7) Shifting costs from variable, kilowatt-hour charges, which are based on the amount of energy consumed, to the fixed customer charge, reduces the financial benefit from efficiency measures because customers will see less savings even when conserving more electricity. Participating customers will still see savings, but their monthly bill savings would be smaller and it would take more time for them to recoup the upfront costs of energy efficiency investments. In essence, the payback period for efficiency improvements will increase.

Ameren's own energy efficiency market potential study demonstrates clearly that payback periods matter to customers. The Ameren Missouri's 2010 DSM market potential study showed that more customers would participate in programs with payback periods of one year than with payback periods of three years. According to witness Morgan, the resulting reduction in energy savings between a one year payback period and a three year payback

period was approximately 30 percent, a significant drop in energy savings. (Morgan at 8, as corrected at Tr. Volume 18, p. 405, line 18 to Tr. 406, line 9). She also explains that this finding is consistent with "extensive research showing that customers are reluctant to invest in energy efficiency unless the payback period they experience will be very short." (Morgan at 7). On this point, overwhelming evidence has been marshaled in recent years by the National Research Council of the National Academy of Sciences, the U.S. Congress's Office of Technology Assessment, the National Association of Regulatory Utility Commissioners, and the National laboratories, among many others. Although "[t]he efficiency of practically every end use of energy can be improved relatively inexpensively,"[1] "customers are generally not motivated to undertake investments in end-use efficiency unless the payback time is very short, six months to three years . . . The phenomenon is not only independent of the customer sector, but also is found irrespective of the particular end uses and technologies involved."[2]

The Ameren study demonstrates that as the payback period lengthens, customers are less willing to implement energy efficiency measures. Shifting the cost of electricity from the variable charge to the fixed charge lengthens the payback period for efficiency improvements. As witness Morgan explained, "The proposed shift of costs from variable to fixed charges is likely to reduce residential and small general service customer participation in utility energy efficiency programs and, thus, reduce the state's capture of all cost-effective energy efficiency."

[1] U.S. National Academy of Sciences Committee on Science, Engineering and Public Policy, Policy Implications of Greenhouse Warming, p. 74 (1991). More recent reviews of energy-efficiency opportunities and barriers appear in National Research Council, Energy Research at DOE: Was it Worth It? (September 2001) and World Business Council for Sustainable Development, Energy Efficiency in Buildings: Transforming the Market, pp. 12 & 20 (2010).

[2] National Association of Regulatory Utility Commissioners, Least Cost Utility Planning Handbook, Vol. II, p. II-9 (December 1988).

(Morgan at 7) Ameren's proposed rate design change undermines Missouri's energy efficiency policy goals and should be rejected.

Ironically, Witness Davis characterizes this adjustment as an attempt to eliminate a utility disincentive to achieve energy savings, and a "move toward alignment with those third-party sources of energy efficiency…" (Exhibit 40, Davis Surrebuttal at 10, lines 7–9) He argues that the lost-revenue adjustment mechanism approved by the Commission in Case No. EO-2012-0142 was insufficient to prevent revenue erosion resulting from reduction in demand caused by energy efficiency in the market. He is wrong on two fronts. First, the Commission-approved lost-revenue mechanism does allow Ameren to recover lost revenues from some non-utility energy efficiency efforts. Specifically, it does so by allowing the company to assume a net-to-gross value of 1.0, which means that it will assume that 100% of the savings from participant-installed measures is fully attributable to Ameren's programs (Unanimous Stipulation, p. 4 footnote 7 and p. 9, fn. 8). Savings estimates by independent evaluators studying similar programs in many other states, including Ameren Illinois programs, are significantly discounted to account for free-ridership, or the extent to which some program participants would have installed the measure even without the contribution from Ameren's programs. By not accounting for free-ridership, the lost-revenue mechanism allows for recovery of revenues that might have been lost as a result of efficiency from third-party policies or programs. Secondly, he is mistaken that Ameren's proposed adjustment "aligns" ratemaking incentives with the objective of encouraging energy efficiency. While it would help to ensure the utility's revenues, as discussed above, it would reduce the customer incentive to save energy, replacing one kind of misalignment with another. By way of contrast, a decoupling

mechanism that maintains the benefits of volumetric rates, but adjusts periodically for differences between authorized and actual recovery, would fully align the incentives of both the utility and customers toward energy savings.

Ameren Witness Davis relies heavily on his quantitative analysis showing that the average $48 annual increase in the fixed customer charge would increase average annual paybacks for energy efficiency measures offered in its programs by about 12 days (Exhibit 40, p. 3). We take no position on the accuracy of the analysis. NRDC's position is that any adjustment that goes in the wrong direction should be rejected unless there are compelling competing goals that demand such an adjustment, which are clearly absent in this case. If you want to drive south, then going north for even a short distance is counterproductive. All else being equal, a more appropriate adjustment would reduce fixed charges to decrease payback periods, such that the relevant comparison would be the payback period under a lower fixed cost scenario, versus payback periods under the proposed fixed charge. Moreover, this adjustment may well be just one in a series of incremental adjustments that will, in the aggregate, add up to a large new barrier to successful energy efficiency programs.

Finally, Witness Morgan points out that "any rate design change like this will make half of the customers better off and half worse off" (Tr., volume 18, 411, lines 20-22), as Mr. Davis concedes (Exhibit 39, Davis Rebuttal, p. 12, lines 1–3). This is because under this proposed rate change, customers using less electricity than others within the residential and small general service classes will experience higher rate increases than customers using more electricity. The half of the classes that presently use more than the average monthly amount of electricity will see a reduction in their bills by shifting cost from the variable to fixed cost. This outcome is

counterproductive in the context of the State's and the Company's shared objective to promote demand reduction.

2. The Proposed Rate Design Contravenes Established Rate-Making Practices.

Basic principles of ratemaking have been articulated and used as guides for regulators as they balance competing objectives in deciding the outcome of rate cases. NRDC Witness Morgan refers to the "Principles of Public Utility Rates" by James C. Bonbright to observe that several of these principles are very relevant to the decision about Ameren's proposal to shift cost recovery from the variable to the fixed charges. She concludes that on balance following these basic ratemaking principles would lead to rejecting the proposed increase in fixed charges for Ameren customers at least based on the current record.

Specifically, Witness Morgan testified that the current proposal calls for weighing the desire to ensure a strong price signal linking high monthly levels of electricity use to higher bills,[3] the desire for fairness between customer classes or groups of customers in a class, and predictability and stability of revenues and electricity bills (Exhibit 650, pp. 9–12).

Because increasing the fixed charge results in higher bills for those who use less electricity and lower bills for those who use more electricity, the adjustment weakens the price signal to customers and reduces their ability to respond to price signals by managing their electricity use. Moreover, it weakens the price signal at precisely the time when the industry

[3] In her rebuttal testimony, Morgan paraphrases one of Bonbright's considerations applied to rate design as the "[q]uality of the price signal concerning the near-, medium- and long-term cost of using electricity and the highly related effect of price on a customer's willingness to invest in structural changes, appliances or equipment that preserve the customer's desired outcome(s) at a lower use of electricity." (Morgan rebuttal testimony at 9) In Wilbon Cooper's surrebuttal testimony, he characterizes witness Morgan's citation to Bonbright's book to support this consideration as "unfounded." (Cooper surrebuttal testimony at 5) However, witness Morgan properly cited Bonbright. *See* JAMES C. BONBRIGHT, PRINCIPLES OF PUBLIC UTILITY RATES 291, 332-33 (1961).

most needs customers to prepare for the need for rising costs due to the need for infrastructure investment as well as fuel cost increases. Ameren Witness and CEO Warner Baxter testified to the growing need for large investment in aging infrastructure and the rising cost of fuel as drivers for higher rates in the near future. (Exhibit 1, Baxter Direct, p. 16, lines 20-21.) Customers who receive strong price signals can manage these increases by managing their energy use, and in the process can actually reduce the need for investment in new or retrofitted generation resources.

The other ratemaking principles Witness Morgan highlights as particularly relevant to consideration of the proposed increase in fixed costs are revenue stability, bill stability and equity among groups of customers. Yet, the Company did not produce evidence demonstrating a need for rate stability, nor did it present evidence regarding the impact of this adjustment on revenue stability. Similarly, there is no evidence in the record regarding how this change would impact customers in terms of bill predictability, or in terms of equity among groups of customers. Therefore, based on the evidence in this record, the proposed increase in the fixed customer charge will certainly degrade the quality of the price signal to customers, and this negative consequence is not outweighed by any compelling positive impact on achieving other desired outcomes.

B. The Commission Should Encourage Ameren To Transition Away From Residential Declining Block Rates In Its Next Rate Case.

Both the residential and small general service tariffs in this case include a declining block design for winter rates. Declining block rates do not send a proper price signal and tend to

encourage excessive consumption of electricity. As Witness Morgan explained in her Rebuttal Testimony (Exhibit 650, p. 17, lines 7–14):

> Put in place in the days before organized wholesale markets such as MISO, when utilities built generation for the summer peak and could do little with the capacity during the lower usage winter period, this rate design encouraged retail sales that contributed to fixed cost recovery and, at least theoretically, lowered rates for everyone… The situation today is different. The ability to sell temporarily excess generation on the wholesale market provides the retail customer base with some relief from bearing the entire fixed cost of generation built to serve a once-a-year peak.

NRDC encourages the Commission to order Ameren Missouri to engage in further work on the declining block rate design issue, so that parties and the Commission may re-engage with this issue in a broad-based review of Ameren Missouri's rate spread and designs or in Ameren Missouri's next general rate case. No party opposes this position; OPC supports it (position statement, p. 7), and Ameren says that if this is done it should be in a generic workshop or rulemaking docket (Ameren position statement, pp. 36–7). NRDC encourages the Commission open a separate docket to address the declining block as part of a broader examination of the basic rates that are likely to provide customers good price signals and stimulate innovation.

Conclusion

Missouri has a strong and admirable policy in favor of energy efficiency. Ameren's proposed rate design change has a negative effect on accomplishing the objectives of this policy. NRDC urges the Commission to reject the proposed increase in the fixed customer charges for its residential and small general service classes. Most significantly, this change will hinder efforts to achieve Missouri's energy efficiency goals by deterring interested customers

from implementing energy efficient measures and negatively impacting Ameren's most energy-efficient customers. This proposed rate design also contravenes the established rate-making practices that strongly consider the importance of price signals to influence customer behavior and is unnecessary in the context of the lost revenue mechanism approved by the Commission in EO-2012-0142. The Commission should, instead, undertake an investigation into rate design options that can best serve the current needs of both the customers and the utilities in Missouri.

Respectfully submitted,
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