Exhibit No.: 115
Issue(s): DSM
Witness: William R. Davis
Sponsoring Party: Union Electric Company
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2011-0028
Date Testimony Prepared: March 25, 2011

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2011-0028

REBUTTAL TESTIMONY

OF

WILLIAM R. DAVIS

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a Ameren Missouri

St. Louis, Missouri
March, 2011

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REBUTTAL TESTIMONY

OF

WILLIAM R. DAVIS

CASE NO. ER-2011-0028

Q. Please state your name and business address.

A. My name is William R. Davis. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, MO 63103.

Q. Are you the same William R. Davis who filed direct testimony in this case?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to further discuss the throughput disincentive, discuss important scheduling considerations regarding demand-side management ("DSM") implementation, and rebut the direct testimony of Missouri Industrial Energy Consumers ("MIEC") witness Maurice Brubaker and Missouri Public Service Commission Staff ("Staff") witness John Rogers regarding DSM cost recovery.

I. THROUGHPUT DISINCENTIVE

Q. Please define the term "throughput disincentive."

A. The throughput disincentive is a result of the traditional regulated utility business model in which the utility's revenues are linked to its sales or "throughput," creating a financial disincentive for the utility to engage in any activity that could reduce sales, like promoting energy efficiency programs.

Q. What are the driving factors of the throughput disincentive?

A. There are three main factors that drive the throughput disincentive. First is rate design. Revenues being collected through volumetric charges are the origin of the throughput disincentive. As the percentage of revenues collected through volumetric charges decreases, so does the throughput disincentive. The duration of time between rate cases is another driver of the throughput disincentive, since the negative financial impact of reduced kWh sales due to energy efficiency savings compounds quickly between rate cases. The third main factor that drives the throughput disincentive is the expansion rate of energy efficiency programs. As energy efficiency programs and their resultant energy savings grow rapidly, the effects between rate cases compound rapidly, creating greater financial disincentive.

Q. Is it possible to align utility financial incentives with helping customers use energy more efficiently without addressing the throughput disincentive?

A. No. The throughput disincentive is a fundamental barrier to the pursuit of energy efficiency. In testimony filed in Ameren Missouri's recent gas rate case, the Commission Staff testified that "The SFV [Straight Fixed Variable] rate design more closely aligns the Company's and customers' interests regarding energy conservation, and enables AmerenUE to expand its promotion of conservation without harming its shareholders because revenues from Residential and SGS customers do not depend on customer usage."[1] Staff appropriately recognized the inextricable link between sales volumes and aligning utility financial incentives to help customers use energy more efficiently.

[1] Case No. GR-2010-0363, Direct Testimony of Dr. Henry E. Warren, November 19, 2010, p. 15 ll. 5-8.

Q. What are lost revenues?

A. Lost revenues are a quantification of the throughput disincentive. Lost revenues are quantified as the reduction between rate cases in billed demand (kW) and energy (kWh) due to installed demand-side measures, multiplied by the fixed-cost margin rate.

Q. Is Ameren Missouri expecting load growth between this rate case and the next?

A. Yes.

Q. Wouldn't that load growth offset the lost revenues from energy efficiency programs?

A. Absolutely not. By implementing energy efficiency programs, the Company is knowingly causing financial harm to itself. This produces an unsustainable situation and creates intense downward pressure on the budgets for energy efficiency programs.

Load growth occurs in two ways: adding new customers and usage per customer growth. As shown in Ameren Missouri's latest Integrated Resource Plan ("IRP") filing, load growth is expected to be about 1.1% annually over the next 20 years. About 80% of that growth is customer growth while the remaining 20% of load growth is expected to come from usage per customer growth. It is also noteworthy that nearly all of that usage per customer growth is expected to come from the industrial class and was identified as a significant uncertainty in the load forecast.

There are additional costs associated with adding customers to the system, and the additional revenues from customer growth help offset those additional costs. Instituting

energy efficiency programs puts the full recovery of those costs at risk by reducing revenues collected from customers.

Use per customer growth also increases revenues from the time rates are set, but this is not a windfall to the Company. The additional revenues from customer usage growth can help offset part of rising costs, and reducing those revenues from our energy efficiency programs amplifies the negative effects of regulatory lag. For example, use per customer is expected to grow about 0.25%. However, when costs increase by more than 0.25% there will be a revenue shortfall.

Lost revenues are an opportunity cost. Simply stated, the Company would receive more revenues without implementing energy efficiency programs.

Q. Couldn't revenues from hotter than normal weather be used to offset lost revenues?

A. No. Normal weather is used as the expected value in the planning process, so there would be no business case to support planning for offsets to lost revenues. Again, regardless of weather, the opportunity cost still exists. In fact, given warmer than normal weather, the Company would be foregoing even higher revenues. Regardless, it would be unbalanced to offset lost revenues when weather is warmer than normal then allow no similar offset when weather is milder than normal.

Q. Have you estimated the lost revenues incurred from the inception of Ameren Missouri's DSM programs through the implementation of rates from this case?

A. Yes. I estimate that Ameren Missouri will have lost around $15 million in revenue from 2009 through the effective date of rates from this case.

Q. Have you estimated the lost revenues that would occur if Ameren Missouri were to go two years without a rate case?

A. Yes. If Ameren Missouri were to continue spending $25 million per year on energy efficiency over the next two years without a rate case, about $53 million[2] of additional revenues would be lost.

Q. Are these levels of lost revenues a powerful incentive to limit spending on energy efficiency?

A. Absolutely. Lost revenues at that level over the next two years would reduce return on equity by as much as 30.7 basis points annually and reduce earnings per share by approximately 14 cents over the two year period. These are not insignificant impacts.

Q. Do the Evaluation, Measurement, and Validation ("EM&V") results include the effects solely attributable to Ameren Missouri's DSM programs?

A. Yes. The EM&V results contain two main components: the gross energy savings and a net-to-gross factor. Estimating gross energy savings is more like an accounting exercise where, for example, you count how many light bulbs you sell and multiply that by a savings per unit. The net-to-gross factor is a way to account for the behavioral aspects of the program. For instance, are customers using the product as expected, did customers engage in the program because of the incentive, or is the customer even an Ameren Missouri customer? These components of EM&V are specifically designed to make sure the savings attributed to the Company are only those that resulted because of the program and not from other factors like weather, the economy, or savings that would have occurred anyway.

[2] The MWh saved would likely be sold as off-system sales and so the Company would retain 5% of that revenue.

Q. Are the EM&V results used to calculate lost revenues?

A. Yes, historical savings come from the EM&V process and future savings are estimated by leveraging past EM&V experience.

Q. Is the Fixed Cost Recovery Mechanism you proposed in your direct testimony the only way to address the throughput disincentive?

A. No, it is not.

Q. Are you proposing an alternate approach?

A. Yes. An alternate approach to address the throughput incentive is to decrease the billing units used to set rates. This approach recognizes that the sales used to set rates do not reflect anticipated savings from energy efficiency programs.

Q. Please explain how this adjustment works.

A. I am proposing an adjustment to the test year sales used to set rates after all other rate design has been completed. This is advantageous because it allows the revenue requirement to be set and the rate design process to be followed as normal. Once that process is complete I would simply reduce the sales used to set rates based on expected savings from Ameren Missouri's energy efficiency programs.

Q. What level of adjustment are you proposing?

A. Based on continued expenditures of $25 million annually, I propose the residential sales be reduced by 250,951 MWh. For the Small General Service, Large General Service, Small Primary Service, and Large Primary Service classes, I propose a total reduction of 227,678 MWh to be allocated based on the 2010 energy savings estimates. For classes with demand-related charges I propose those demand units be reduced by the same percentage as the energy.

Q. Is there a link between this billing unit adjustment and future DSM spending levels?

A. Yes. The $25 million annual spending level is approximately the average level of expenditures over the 2008 IRP implementation plan (2009-2011) and is predicated upon the billing unit adjustment I am proposing.

Q. If the Company's estimate of DSM related impacts between cases turns out to be too high, is there a possibility that the Company could over-collect its fixed costs based on the adjustment you have proposed?

A. As with any cost or revenue element impacting the setting of rates, a difference in the actual level of that element from the amount used to set rates can produce over- or under-collections during the period when rates are in effect, all other things being equal. However, because my proposal seeks to use forward-looking information and also is a new concept for the Commission, the Company is willing to commit to building in a mechanism to prevent such an over-collection from occurring.

Q. What do you propose to ensure that the estimated load impacts built into rates in this case are not over-stated?

A. The Company would, in its next rate case, compare the adjustment to the final MWh savings result using its DSM evaluation for the time period that those rates are in effect. The Company would then make an adjustment to correct for any over collection related to this billing adjustment in order to keep customers whole if Ameren Missouri's energy efficiency programs don't obtain the level of MWh savings which is anticipated.

II. IMPORTANT SCHEDULING CONSIDERATIONS

Q. What is the current status of the Missouri Energy Efficiency Investment Act ("MEEIA") rules?

A. The rules are not yet effective and likely will not be effective for several months. First, they will have to be published by the Secretary of State and then in the Missouri Code of State Regulations. The rules will not become effective until thirty days after publication in the Missouri Code of State Regulations.

Q. Are you familiar with the testimony of Mr. Rogers regarding the scheduling aspects of energy efficiency?

A. Yes. Mr. Rogers states that it is more appropriate to deal with the energy efficiency aspects of this rate case in a filing under MEEIA. He also provided a schedule to demonstrate how he believes events are aligned to support his conclusion.

Q. Do you agree with Mr. Rogers?

A. No. Mr. Rogers' "optimal" schedule does not seem realistic. First, the schedule includes only 6 months for adjudication of Ameren Missouri's 2011 Integrated Resource Plan filing, even though its 2008 filing took 12 months. Furthermore, the recent filings of the other Missouri investor owned utilities have taken about nine months on average.

The schedule presented in Mr. Rogers' testimony also ignores realities associated with program implementation. It excludes any time associated with vendor contract development. It will take three to six months to renew existing contracts and six to nine months to develop contracts with new vendors.

Mr. Rogers also notes that Ameren Missouri's energy efficiency program tariffs are scheduled to expire September 30, 2011. This is true, but there is no reason that those programs couldn't be extended as a part of this rate case. Even with his theory of this alignment of timing, Mr. Rogers does not propose anything to address the throughput disincentive that would support the continuation much less the ramping up of those programs.

Q. Are the MEEIA rules expected to solve the issues associated with implementing energy efficiency programs in Missouri?

A. No. The approved rules address several contentious issues, such as changing rates outside of a rate case, which are likely to result in litigation. If a legal battle ensues, it is possible that any demand-side investment mechanism approved will face lengthy challenges in court and could ultimately be overturned. Furthermore, the definition of lost revenues and retrospective recovery of an incentive are not consistent with the alignment of utility financial incentives with helping customers use energy more efficiently. This will prevent the MEEIA rules from reducing barriers to cost-effective energy efficiency in Missouri, regardless of the possibility of legal challenges.

Q. Is the timing of this rate case better aligned to support the continuation of Ameren Missouri's existing program without interruption?

A. Yes, it is a much more realistic schedule given that the outcome of the rate case will be known by July 2011. Additionally many of the legal issues may be avoided (at least with respect to Ameren Missouri) if the Commission acts within this rate case and adopts a mechanism as the Company has proposed.

III. DSM COST RECOVERY

Q. Are you familiar with the direct testimony of Mr. Brubaker regarding DSM cost recovery?

A. Yes, I am. Mr. Brubaker concludes that Ameren Missouri's current method of cost recovery for DSM resources is superior to that for supply-side resources both in terms of cash flow considerations and earnings.

Q. Do you agree with Mr. Brubaker's conclusions?

A. Absolutely not.

Q. Please elaborate on why you disagree.

A. Mr. Brubaker contends that the current DSM cost recovery is more favorable to earnings since Ameren Missouri is allowed to continue to accrue carrying charges on the DSM expenditures until the time amortization begins, and that amortization does not begin until rates are changed in the next rate case. While this is a positive feature of the current cost recovery method, it ignores important differences between demand-side and supply-side resources. First, the development of significant demand-side resources requires continuous spending over a long period of time. Second, the Company can time a rate case filing to mitigate the rate lag caused by the delay between when a major supply-side project is placed in-service and when it would be reflected in rates. By timing the rate case filing around the in-service date, the Company can mimic the treatment demand-side resources currently receive. Attempting to file rate cases continuously to avoid the same kind of lag with demand-side resources is impractical. Further mitigation of the lag experienced with a large supply-side investment can be achieved through the use of construction accounting, as was approved for the Sioux scrubber.

Q. Did you agree with Mr. Brubaker's assessment of cash flows being superior for DSM investments?

A. No. As I mentioned in my direct testimony, DSM expenses are incurred as the utility engages in a variety of marketing strategies with the goal of altering customers' energy-related purchases and consumption behavior. In fact, DSM expenses are treated in a manner that is inferior to that applied to other expenses. Other expenses are built into rates dollar-for-dollar while, currently, DSM expenses are amortized and collected over a period of years. However, using a 3-year amortization is a reasonable way to mitigate the rate impacts associated with increases in the DSM expenditure level while not unduly extending recovery.

Q. Mr. Brubaker also argues that using a ten-year amortization is more consistent with "matching benefits and costs." Is this valid?

A. No. That logic could be inappropriately applied to many kinds of expenses. For example, it is a maintenance *expense* if Ameren Missouri paints a structure even though the paint lasts several years. That expense is booked entirely in the period in which it is incurred; it is not amortized over the expected life of the paint job. Expenses are not distinguished from capital expenditures merely by the duration of the benefits they produce.

Q. Are there any other cash flow differences between a supply-side resource and demand-side resources?

A. Yes. First, it is appropriate to compare a series of demand-side expenditures to a single generating investment since demand-side resources are mainly implemented to postpone that large supply-side resource. The cash flows for a large supply-side resource are negative during the few years of construction, and then positive for the remaining life of the asset as it is depreciated. In contrast, the development of significant demand-side resources

requires continuous spending over a long period of time. If the utility is capitalizing those expenditures, the cash flow will initially be negative. After many years DSM spending could level off. At that point the cash flows would be neutral. Since the spending is continuous, there is no period of positive cash flow and the unamortized regulatory asset balance does not decrease over time.

Q. Are there other considerations when determining the appropriate cost recovery method for DSM?

A. Yes. The recovery risk of DSM expenditures is considerably higher than that for a supply-side investment. When a traditional supply-side resource goes into service the output is tangible and easy to measure. With DSM, although the impacts are measured using the most reliable methods available, the load impacts may be disputed and are never known with certainty. Company witness Daniel Laurent fully explains that while Ameren Missouri has successfully implemented its Lighting and Appliance program, the Commission Staff has consistently voiced concerns and has advocated deferring recovery of those expenses not only in this rate case but also took that position in Ameren Missouri's last rate case.

As the assumed recovery period for prudent costs (i.e., the amortization period) is extended, the risk of recovery is also heightened. The use of a regulatory asset as the DSM cost recovery vehicle is a concern for Ameren Missouri. At a six-year amortization, an energy efficiency portfolio with expenditures as aggressive as those estimated for the Realistic Achievable Potential ("RAP") portfolio, described in Ameren Missouri's 2011 IRP, would produce an unamortized regulatory asset of $659 million in 2030. Potential for inconsistent treatment of the regulatory asset heightens recovery risk and could lead the financial community to negatively adjust their views of the Company's expected financial

position. Such inconsistent treatment, and the associated negative financial impact, could be triggered by doubts raised about the effectiveness of DSM programs well after implementation and through no fault of the Company.

Q. Please summarize your testimony and conclusions.

A. For Ameren Missouri to keep its current energy efficiency programs going with an annual budget of $25 million over the next two years, the Company's financial incentives need to be more closely aligned with helping customers use energy more efficiently. Waiting for the Company to file under MEEIA may not produce a materially different result and would, at a minimum, delay important decisions for the advancement of energy efficiency programs. Therefore, developing a supportive energy efficiency cost recovery framework in this rate case is a more constructive alternative to that process. Specifically I recommend that the Commission:

- Reduce the billing units used to calculate customer rates to reflect the anticipated effects of its energy efficiency programs. I propose the residential sales be reduced by 250,951 MWh. For the Small General Service, Large General Service, Small Primary Service, and Large Primary Service classes, I propose a total reduction of 227,678 MWh to be allocated based on the 2010 energy savings estimates. For classes with demand related charges, I propose those demand units be reduced by the same percentage as the energy related charges.
- Include in rate base, with a three-year amortization period, the DSM expenditures subsequent to those included in Ameren Missouri's last rate case plus interest accrued at the Company's AFUDC rate.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area.	)))))	Case No. ER-2011-0028

AFFIDAVIT OF WILLIAM R. DAVIS

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

William R. Davis, being first duly sworn on his oath, states:

1. My name is William R. Davis. I work in the City of St. Louis, Missouri, and I am employed by Ameren Services Company as Senior Load Research Specialist.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 14 pages, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

William R. Davis

Subscribed and sworn to before me this 25 day of March, 2011.

Notary Public

My commission expires:

Amanda Tesdall - Notary Public
Notary Seal, State of
Missouri - St. Louis County
Commission #07158967
My Commission Expires 7/29/2011