Exhibit No.:
Issues: Energy Efficiency
Witness: Pamela G. Lesh
Sponsoring Party: Natural Resources Defense Council
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2010-0036
Date Testimony Prepared: February 11, 2010

MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2010-0036
REBUTTAL TESTIMONY
OF
PAMELA G. LESH
ON
BEHALF OF THE NATURAL RESOURCES DEFENSE COUNCIL

Q. Please state your name and business address.

A. My name is Pamela G. Lesh. My business address is 17 Masaryk, Lake Oswego Oregon 97035.

Q. Are you the same Pamela G. Lesh that previously submitted direct testimony in this proceeding?

A. Yes I am.

Q. Will you please summarize the scope of your rebuttal testimony?

A. Yes. I will be responding to the direct testimony of Mr. John Rogers, representing the Staff of the Missouri Public Service Commission ("MPSC"), regarding his testimony on the general conditions MPSC Staff proposes apply to Ameren UE's recovery of the costs of offering energy efficiency programs to its customers. I also address the direct testimony of Dr. Maurice Brubaker, representing the Missouri Industrial Energy Consumers (MIEC), regarding his position that inter-generational equity requires placing energy efficiency expenditures in rate base subject to some period of amortization.

I. Cost Recovery of Prudently Incurred Energy Efficiency Expenditures Should Not Depend on the Results of Evaluation, Measurement and Verification Studies

Q. What is your understanding of the general conditions MPSC Staff proposes apply to an energy utility's recovery of the costs of energy efficiency programs?

A. My understanding of the testimony that appears on pages 44-47 of the Staff report in this case is that energy utilities could recover no costs until the savings associated with a particular program have been verified and then only if the program is still found cost-effective after the verification. I further understand that Staff believes this approach is required by the Missouri Energy Efficiency Investment Act (MEEIA) because it is analogous to cost recovery permitted for supply-side investments, such as combustion turbines, the costs of which utilities cannot recover until the turbines are complete and capable of producing electricity.

Q. Did Mr. Rogers provide any detail or examples for this approach?

A. No.

Q. Do you agree with Mr. Rogers that cost recovery for energy efficiency expenditures should be comparable to cost recovery for expenditures on a combustion turbine, which utilities recover once the turbine is constructed and capable of producing electricity?

A. I agree that cost recovery should be handled comparably for demand-side and supply-side resources but this does not lead me to the same conclusion as Mr. Rogers about the timing of cost recovery or the need to engage in evaluation, measurement and verification (EM&V) before, and as a basis of, cost recovery. It is useful to work through comparability for the three separate cost recovery questions involved with either a supply-side resource or a demand-side resource:

- Timing
- Basis
- Amount

<u>Timing</u>

Every installation under an energy efficiency program is capable of producing savings once it is installed and this happens – under most energy efficiency programs – much more quickly than it does for even a simple cycle combustion turbine. Thus, to make the timing comparable, utilities should have the opportunity to recover the amounts spent under energy efficiency programs as measures under the programs are installed. In reality, this often means expensing these costs because the amount spent ties closely to the number and timing of installations. Expensing is the general practice currently among the states and, in the Midwest specifically, the practice in at least Illinois, Indiana, Iowa, Ohio and Michigan.

Basis

The basis of cost recovery relates to the threshold questions:

1. Was it prudent to acquire this resource?
2. Is the resource capable of producing power or, in the case of demand-side resources, savings?

Prudence in choice of resource is typically determined based upon what was known and knowable at the time of the decision to acquire the resource. For both types of resources, these are the planning assumptions. We do not require that a given supply-side resource still be the least-cost resource based on the environment at the time it is finally complete (and certainly not after several years of operation). Electric utility history includes many examples of this occurring. One might imagine a natural gas combined cycle combustion turbine planned as a least-cost resource in 1997 but completed in 2001, as gas prices rose to previously unimaginable levels. One can also find instances of peaking plants built in anticipation of high peak loads and a lack of available market power for purchase only to find that, in the first decade of their lives, these plants run rarely if at all. I am not aware of any demand-side resource costs disallowed because the planning assumptions regarding the operation of particular measures, in a particular service territory, by particular customers, were found – several years later – to differ from experience.

The need to know whether the resource is capable of producing energy or savings requires different approaches for supply-side resources and demand-side resources.

For the former – a 250-megawatt combined cycle combustion turbine plant, for example – meeting this need usually occurs by running the just-completed plant through a series of tests. This is necessary because the plant is actually a complicated combination of a large number of components, all of which must work together to produce electricity. Once it produces enough electricity to pass these tests, we declare it capable. We do not require that the supply-side resource have this capability continuously, over time, for some number of years after completion.[1]

Demand-side resources are, largely, particular single technologies replacing one piece of equipment, appliance, or light with another that uses less electricity or adding insulation, which we collectively call "measures." This is what the utility programs invest in. Each measure is capable of producing savings as soon as it is installed and, unless it is an experimental technology, this capability is usually documented many times over. The actual savings a measure or set of measures will produce over time may vary with the consumer's operational choices and external conditions, but this is not conceptually different from a generating resource operating differently over time because of forces internal to (e.g., forced outage rates) and external to (e.g., the wholesale market) the plant. Thus, numerical results under a program –

[1] Operational problems may have consequences, but typically not the inability to recover the investment cost of the resource. Once in rate base, generating plants tend to stay there until retired.

types and numbers of measures installed – can serve as a sufficient demonstration of capability to provide a basis for cost recovery.[2]

Amount of cost recovery

The practice for determining the amount of cost recovery is identical across supply-side and demand-side resources and depends on a finding that the utility's expenditures in acquiring the resource were prudent. A mismanaged combustion turbine construction program and a mismanaged energy efficiency program will have the same result: disallowance of the cost found to be the result of the imprudence involved. The nature of the resources makes the timing by which this happens different, however. For supply-side resources, it can conveniently happen when all (or most) of the investment expenditure has been incurred and the plant is ready to enter service. Demand-side resources are ready to enter service continuously from the first installation under a program. If the utility is expensing the costs, as most states now permit, evaluation of prudence will necessarily have to lag the cost recovery and apply retroactively if the regulator finds imprudence. It is worth recognizing a difference between supply-side resources and demand-side resources on the issue of expenditure prudence, however. In states such as Missouri, decades of experience with what does and does not amount to an "imprudent" expenditure are available for supply-side resources. Utilities can make a reasonable evaluation of imprudence risk as they proceed through a construction or acquisition process. This may not be the case for demand-side resources. The more potential imprudence risk utilities perceive around demand-side resources, the more conservative they are likely to be, limiting innovation and customers' ability to achieve all cost-effective energy efficiency savings. Thorough vetting

[2] Program designs that allow consumers to self-install the measures (such as compact fluorescent light bulbs) have challenged this approach because it is not a certainty that a consumer will actually install the measure acquired with an incentive. I am not aware of any instance in which this concern has prevented the utility from recovering program costs, however.

of programs before they begin to address concerns about design and planned spending, and an expectation that delivery according to the plan will be found prudent, can help reduce this risk.

Q. What is the role of EM&V then, if not as a determinant of the timing, basis and amount of cost recovery?

A. EM&V occurs for at least four reasons, only one of which is similar to a supply-side resource.

The first reason to do EM&V is to improve the planning assumptions about a given resource. This reason is the same for both supply-side and demand-side resources, but the methodology differs. For supply-side resources, we tend to look at the observed performance of these types of resources across the region or country, depending on how common the resource is. There are various places to go to obtain these operating statistics, which exist for many years of operation of many types of resources although this may not be true for some newer technologies, such as next-generation nuclear or the latest version of combined cycle combustion turbines. For demand-side resources, what is most relevant is the performance of the measures in the utility's service territory, although information regarding performance in similar areas can certainly be useful. Generally, utility-specific statistics about measure performance require EM&V.

The second reason to do EM&V for demand-side resources is to ensure that, if the utility is recovering the margin lost on energy efficiency it helped its customers achieve, the lost sales actually happened. This is not an issue, of course, for a supply-side resource where the cost recovery – including capital costs – on the resource come directly from sales of kilowatt-hours. Nor is it an issue, incidentally, if the utility is addressing lost revenues through a decoupling mechanism.

Third, EM&V occurs when, in an effort to make demand-side resources comparable with supply-side resources, regulation permits the utility a performance-based incentive that produces income from the net benefit created by a particular energy efficiency program or portfolio.

In both the latter two instances of EM&V, practice varies whether the EM&V findings apply retroactively to lost revenues and incentives on program years already past or only to program years yet to come.

EM&V may also play a role in states with an Energy Efficiency Resource Standard (EERS), in helping determine where cumulative savings stand against the goal.

Q. Based on the above, what policy do you recommend the MPSC adopt regarding AmerenUE's cost recovery of expenditures on energy efficiency programs?

A. NRDC recommends the following approach:

- Programs AmerenUE offers are reviewed in a contested case process before they begin, with the goal of stakeholders raising all relevant objections at that time to the program design and expected expenditures on incentives, administrative costs, and overhead. Once a program is approved, operation of that program as planned will generally be considered prudent, unless circumstances arise that make it clear that proceeding as planned is not prudent.
- AmerenUE recovers energy efficiency program costs through a tracker mechanism that charges customers in the current year for costs AmerenUE expects to spend in that year, subject to true-up for differences in actual spending from planned spending.
- The true-up proceeding is a contested case process in which stakeholders receive information on and can ask questions about whether AmerenUE operated its programs as planned during the prior year and offer any evidence that the stakeholders believe demonstrates

imprudence. If the Commission finds imprudence, the amount disallowed is part of the adjustment of forecasted to actual.

Q. Do any other Midwest states follow this approach to energy efficiency program recovery?

A. Yes. This is very similar to how Iowa has been handling energy efficiency program expenditures for a number of years.[3] Iowa uses an automatic adjustment mechanism, with annual reconciliations, and periodic prudence reviews that can result in disallowance of costs if the utility did not take all reasonable and prudent actions necessary to implement the approved energy efficiency plans. In that event, costs in excess of prudently incurred costs are disallowed through an adjustment to the mechanism going forward.

Indiana also permits balancing account treatment of energy efficiency program expenditures, with recovery not contingent upon EM&V.[4] EM&V affects only future plans and the availability of incentives. Illinois is similar, allowing recovery of prudently incurred costs through an automatic adjustment mechanism reconciled annually.[5] Ohio requires that utilities expense energy efficiency program costs and proposed rules in Michigan provide similar treatment as well.

Q. Is NRDC's suggested approach consistent with the MEEIA?

A. Yes. First, the MEEIA requires that the Commission provide timely cost recovery. Section 3(1). The statute does not modify this by any reference to measurement or verification. As I explained above, such a limitation on cost recovery is unlikely to be timely

[3] See Iowa Administrative Code Chapter 35.
[4] See Indiana Administrative Code Chapter 170.
[5] S.B. 1592, 2007.

and is not comparable to the cost recovery allowed supply-side resources. The only reference to M&V appears in the subsection on earnings opportunities, and states that these shall be timely and associated with cost-effective <u>measurable</u> and <u>verifiable</u> efficiency savings. It does not require that the savings be <u>measured</u> and <u>verified</u> <u>before</u> any earnings opportunity can occur.

II. A Rate Base/Amortization Policy Is Not the Best Choice for Energy Efficiency Program Costs

Q. What policy do most states follow for utility recovery of energy efficiency program costs?

A. Most states require or allow utilities to expense these costs. As I noted above, this is the general practice in the Midwest. Often states that engaged in partial or complete restructuring established system benefit charges to provide funds for these costs.

Q. Are you aware of any states that allow a rate base/amortization treatment?

A. Nevada rules[6] permit rate base treatment but I am not certain if the Nevada utilities are currently using this provision. This is the only states I am aware of that still applies a rate base treatment.

Q. What are the consequences of choosing a rate base/amortization treatment?

A. Generally speaking, a rate base approach for energy efficiency expenditures will increase costs for customers, with fewer benefits. If utilities must capitalize these expenditures, customers will pay not only the costs of the programs (return of) but also return <u>on</u> the investment, grossed-up for federal and state income taxes. If the utility does not engage in a rate case every year, the revenue requirement may be higher than would otherwise be the case

[6] NAC 704.9523

because the amount of unamortized investment remaining does not diminish by the accumulated depreciation since the last rate case. Moreover, return on investment relates to the amount spent – as it does for supply-side investments – rather than being based on the achievement of net benefits or performance to stated goals.

Perhaps most concerning is the consequence of using this approach if the utility plans to invest steadily over a period of years. The unamortized investment will grow every year and, even if all spending stops, require amortization for the set period of years after the last actual expenditure. Although in the very first years the revenue requirement effects of rate basing versus expensing will be lower, the revenue requirements of a rate base approach soon surpass those of expensing. Utilities would be pushing this bubble of unamortized energy efficiency investment in front of them for many years into the future.

It is worth noting that the effects of rate-basing a steady, year-by-year program of energy efficiency are quite different from rate-basing the costs of a one-time, central station supply-side resource. In that case, once the investment enters rate base, it only diminishes with annual depreciation; only capital additions can increase because inflation does not apply to the original cost. Thus, if the initial investment was $500 million, with a 40-year life, the revenue requirement effect of the plant would start at its highest point[7] in the first year and decline thereafter.

Q. Do you agree with Dr. Brubaker that intergenerational equity requires placing energy efficiency expenditures in rate base and spreading their recovery over time?

[7] This is assuming that fixed and variable operation and maintenance costs are reasonably stable over the life of the plant. Natural gas-fired generation may show a different pattern if a plant entered service when gas prices are low and they subsequently become much higher because the capital cost of this type of generation is often only about 25 percent of the total cost, with variable fuel cost comprising the rest.

A. No. Energy efficiency is not like a single generating resource that costs hundreds of millions – if not billions – of dollars, the capital costs of which must be spread over time to prevent serious mismatching of costs and benefits. Even at that, rate basing is an imperfect way to do the matching of costs and benefits because costs will be generally highest the year a plant enters rate base and significantly lower – particularly in nominal terms – over time.

Experience has shown that better energy efficiency programs are sustained or gradually growing annual expenditures that acquire steady (or growing) amounts of energy savings over time. Each year's worth (or "generation") of customers will have the same or better access to the benefits of these programs. If a utility's plans called for a dramatic increase in energy efficiency spending, it might make sense to phase this in by using some deferral and amortization. Generally, however, expensing will cause the least disruption to rate stability and each year's customers will receive benefits about equivalent to future year's customers.

Q. Does this complete your rebuttal testimony?

A. Yes, it does.