

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company d/b/a Ameren )	0142	
Missouri's Filing to Implement Regulatory Changes in )		Case No. EO-2012- <del>1042</del>
Furtherance of Energy Efficiency as allowed by MEEIA )		

**NOTICE OF EXTRA-RECORD COMMUNICATION**

Issue Date: June 4, 2012

On June 4, 2012, we received the attached correspondence from The Cadmus Group, Inc. by

US Mail.

Respectfully submitted,



Kevin D. Gunn, Chairman



Robert S. Kenney, Commissioner

Dated at Jefferson City, Missouri,  
on this 4<sup>th</sup> day of June, 2012.



May 25, 2012

Kevin Gunn  
Chairman  
Missouri Public Service Commission  
200 Madison Street, PO Box 360  
Jefferson City, MO 65102-0360

Dear Commissioners:

Cadmus has reviewed Ameren's application for approval of a demand-side incentive mechanism (DSIM), file number E0-2012-0142. We find that Ameren's application is consistent with best practice methodologies for demand-side management (DSM) program implementation, cost recovery, revenue impacts, and performance incentives. We also find that Ameren's application is consistent with the Missouri Code of State Regulations (CSR) and the Missouri Energy Efficiency Investment Act of 2009.

Ameren has raised three issues in its application:

- Appropriate methodology for DSM program cost recovery
- Throughput disincentive
- Comparable supply-side and demand-side earnings potential

Jurisdictions nationwide are implementing several strategies to deal with these issues, and there are generally accepted regulatory mechanisms available for each issue. While the industry has been grappling with these issues since DSM started to become a significant portion of the integrated resource planning portfolio more than a decade ago, no single approach has emerged as a "one size fits all" strategy.

## **Current Common Strategies**

The following are brief descriptions of the current strategies employed most widely for each issue.

### **Cost Recovery Mechanisms**

The three commonly employed mechanisms for recovering expenditures of the DSM programs themselves are these: (1) expensing; (2) deferral and amortization; and (3) contemporaneous recovery.

Of 51 jurisdictions reviewed, Cadmus found that only eight jurisdictions currently treat DSM as an expense, while two allow deferral and amortization of DSM expenses. The remaining 41 jurisdictions have moved to or are planning to adopt some form of contemporaneous cost recovery mechanism (typically a tariff rider or legislated System Benefits Charge).



Ameren's proposed expense-tracker mechanism is consistent with a contemporaneous recovery approach.

### **Throughput Disincentive**

Successful DSM programs reduce the utility's sales from what they otherwise would have been. Alternatively, supply-side resources are increased to meet the future projected demand.

As in Ameren's case, rates typically recover a portion of the utility's fixed costs through the volumetric portion of the rate structure. Consequently, the decline in sales associated with successful DSM programs leads to an under-recovery of the utility's authorized fixed costs.

Regulatory commissions have authorized three basic mechanisms to address the recovery of fixed costs: (1) lost revenue adjustment mechanisms; (2) decoupling; and (3) straight fixed-variable pricing. While 29 jurisdictions have adopted lost revenue or decoupling mechanisms, another 12 have authorized but not yet implemented them.

The fixed cost recovery portion of Ameren's shared net benefit approach is consistent with lost revenue adjustment mechanisms adopted in other jurisdictions.

### **Comparable Supply-Side and Demand-Side Earnings Potential**

Utility investors earn a return on investment in utility-owned assets. Typically, DSM investments do not result in a utility-owned asset. Consequently, the earnings potential is dissimilar between supply-side and demand-side resource options. Recognizing this dissimilarity, the NARUC, the Missouri CSR, and the Missouri Energy Efficiency Investment Act recommend the adoption of mechanisms that allow the supply-side and demand-side resources to be treated on an equivalent basis. Twenty-four jurisdictions have adopted shareholder incentive mechanisms, and another 11 have authorized but not yet implemented them.

The incentive position of Ameren's shared net benefit approach is consistent with these approaches.

### **Impact of Regulatory Strategy on Savings**

A review of jurisdictional savings as a percentage of revenue indicates a strong correlation between overall savings and the existence of regulatory mechanisms aiming to mitigate the disincentives associated with DSM investments. Of the 19 jurisdictions saving more than one-half percent of sales annually through energy efficiency, all but one have implemented or authorized lost revenue or decoupling mechanism. Also, 15 of 19 have implemented or authorized a performance incentive mechanism.

## Other Issues

As described below, the two other issues impacting Ameren's filing are these:  
(1) technical reference manual and deeming savings; and (2) deeming net-to-gross values.

### **Technical Reference Manual (TRM) and Deeming Savings**

Several jurisdictions have adopted either a statewide or utility-specific TRM. The main driver behind adoption of a TRM is to establish a set of savings to use for program planning and cost-effectiveness analysis. The TRM values are structured with best available science at the time of the program launch. That, however, does not guarantee that actual savings will match the TRM values, so it is not unusual to have utility goal attainment measured using verified savings. (In other words, it is common to use the TRM values as deemed measure savings and third-party verification of the number of installations.) This occurs through a careful audit of the program databases, using a statistically valid sample to verify accuracy of records (including correct application of TRM values, TRM algorithms, etc.), phone surveys, and site visits. The purpose of this effort is to estimate the appropriate number of measures to use in calculating *verified savings*.

In conjunction with the verified savings, a full evaluation (billing analysis, engineering simulation, etc.) is used to estimate *ex post gross savings* and net-to-gross analysis is determined to estimate *net savings* (Figure 1). This model, which is being considered in Indiana among others, is currently in place in Ohio and Michigan.

Figure 1. The Typical Approach to Classification of Savings

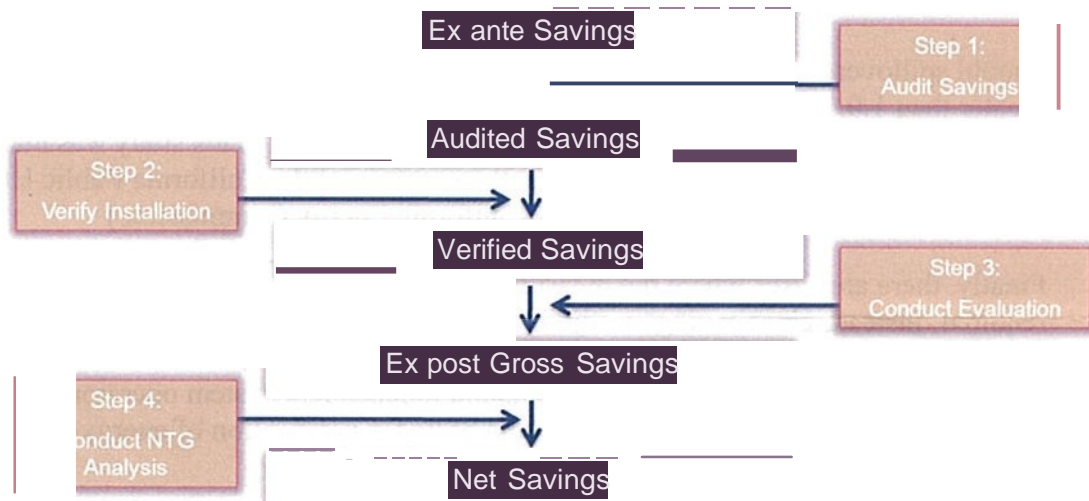


Table 1. Uses of Various Saving Estimates

Savings Estimate	Purpose
Ex Ante	Goal setting
Audited Savings	Intermediate step only
Verified Savings	Assessment of goal attainment
Net Savings	Program design improvements Planning future programs Cost-effectiveness analysis (prospectively) Calculations of lost margins

*Deeming Net-to-Gross Values*

In general, the treatment of freeridership and net-to-gross values (NTG) tends to vary across jurisdictions. Some jurisdictions include both freeridership and spillover in their definitions of net savings, while others count only freeridership. In the majority of cases where NTG is required, it is applied only prospectively for planning and improving program design.

A review of practices in 32 jurisdictions having active energy-efficiency programs illustrates this variation, and the available information shows:

- In 12 of the jurisdictions (38%), there are no NTG requirements
- In 7 jurisdictions (21%), only freeridership is accounted for.
- In the remaining 13 jurisdictions (41%) spillover is included in the definition.

Should spillover be included, it is likely that many of the NTG ratios will be near or greater than 1.0. Over two-thirds of all evaluation studies reviewed in a recent best practice study had a net-to-gross value of approximately 1.0. (This study was managed by Pacific Gas and Electric Company, under the auspices of the California Public Utility Commission and in association with the California Energy Commission.)

Finally, there are cases where the measurement of NTG or its components are not required. Instead, gross savings-adjusted for actual installation rates-are used as the measure of program performance. This is also the case with regional transmission organization (RTOs) such as the New England independent system operator (ISO-NE), where verified gross savings are used as the basis for verification of energy-efficiency bids into the forward energy market.

Currently there are several jurisdictions that deem the NTG retrospectively, i.e., for assessment of goal attainment. These include Iowa and Arizona (NTG=1), Michigan and New York (NTG =0.9).

A variety of methods have been used to either measure or account for freeridership. The most common method relies on "self-report." At a basic level, self-report involves asking participants a series of questions about what they would have done in the absence of the program. Responses are then scaled, weighted, and combined to produce a composite freeridership score (or index) for each respondent.

The obvious limitation of the self-report approach is that it does not produce an NTG ratio. Other components of NTG-spillover and market transformation effects—must then be estimated separately and then factored into the calculations. But eliciting reliable information about intentions and motivations can be thorny.

- Self-reporting suffers from a serious response bias involving social desirability, which is the tendency of respondents to gauge their responses to conform to socially acceptable values.
- Another—less tractable—aspect to response bias is construct validity, which raises questions about what the survey results actually measure. The problem stems from the fact that while survey respondents, by virtue of their participation in the program, are predisposed to conservation, it is not clear to what extent their responses are conditioned by the effects of the conservation program itself.

These problems could make the analysis a subjective exercise, open to constant dispute. Different evaluations of similar programs conducted by analysts using seemingly similar methods have produced drastically different results.

The use of surveys for determination of spillover effects, whether for participants or nonparticipants, is significantly more problematic. Furthermore, in areas with long histories of conservation programs and activities, it is no longer possible to parse out who is a freerider and who was influenced by the program. Could it be that, in the case of such transformed markets, what is being measured in freeridership surveys is in fact the opposite: spillover?

A report produced by an independent evaluator in 2006, summarizing the results of recent programs in California noted that, "... the issues of identifying freeriders are complicated and estimating reliable program-specific freeridership is problematic at best."

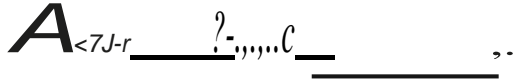
## Conclusion

In conclusion, our experience in other jurisdictions leads us to believe that the industry is heading in the direction of using TRM values with deemed NTG values in retrospective manner. All values are subject to change, based on the evaluation of the programs; however, all such changes happen in prospectively. No programs with low NTG values should be carried forward.

Missouri Public Service Commission  
May 11, 2012

Also our research seems to indicate that Ameren's proposal is consistent with the treatment accorded DSM implementation in other jurisdictions. Implementation of a contemporaneous cost recovery mechanism, allowances for fixed cost recovery, and a provision that allows a return on DSM investments will allow demand-side and supply-side resources to be evaluated on an equal basis to the benefit of the citizens of Missouri.

Sincerely,



M. Sami Khawaja, Ph.D.  
Sr. Vice President, Energy Services  
The Cadmus Group