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April 26, 2017

Chairman Daniel Hall
Missouri Public Service Commission
200 Madison Street
Governor Office Building
Jefferson City, MO 65101

Re: MEEA's Comments on Proposed Missouri Energy Efficiency Investment Act Rules

Dear Chairman Hall and Commissioners of the Missouri Public Service Commission:

The Midwest Energy Efficiency Alliance (MEEA) submits the following comments on the proposed Missouri Energy Efficiency Investment Act (MEEIA) rules, Case No. EX-2016-0334.

MEEA is a non-profit, membership association working across a 13-state region in the Midwest. Our members include utilities (investor-owned, municipal, and cooperatives), energy efficiency technology and service providers, manufacturers, state and local governments, and research and advocacy organizations. We are the Midwest's key proponent and resource for energy efficiency policy, helping to educate and advise a diverse range of stakeholders on ways to pursue a cost-effective, energy-efficient agenda. The Missouri Division of Energy, Kansas City Power & Light, City Utilities of Springfield, Columbia Water & Gas, Missouri Energy Initiative, Missouri Botanical Garden's EarthwaysCenter, Lockheed Martin, Renovate America, and Inova Energy Group are among our members advancing energy efficiency in Missouri.

As the region's leading voice for energy efficiency, MEEA is pleased to see the Missouri Public Service Commission (the commission) examine the MEEIA rules and propose many changes that will serve the state's residential, commercial, and institutional utility customers. Since 2013, annual incremental energy savings have oscillated between 400 – 600 GWh.

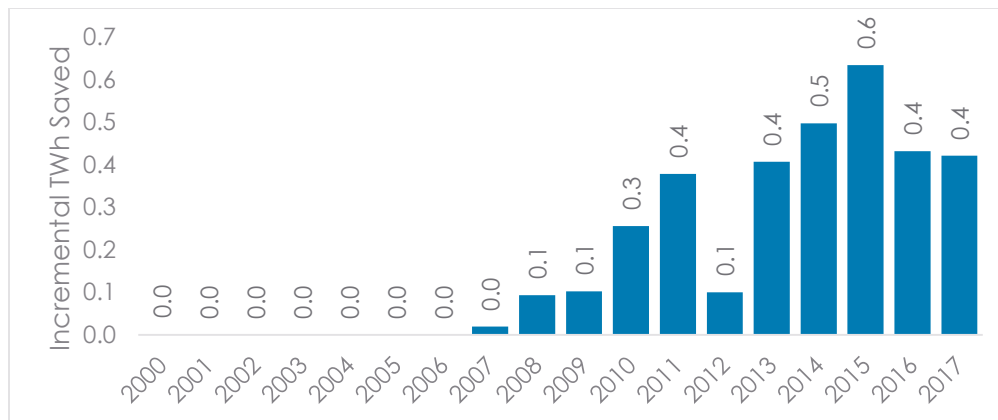


Figure 1: Annual Incremental Electricity Saved in Missouri through Utility Energy Efficiency Programs. Source: Utility filings and EIA Form 861.

The opportunity to comment on the proposed MEEIA rules is a chance to create a regulatory framework to increase investment in cost-effective energy efficiency. We submit recommendations in the following areas:

- True-ups to support accurate throughput disincentive components of the demand-side investment mechanism (DSIM);
- Metrics to include in impact evaluations of demand-side energy savings programs;
- Clarification of the annual incremental energy savings targets;
- Design of the energy efficiency market potential study;
- Requirements for customers seeking to opt-out of utility-provided demand-side energy savings programs;
- Characteristics of an impactful statewide collaborative; and
- Clarifications and use of a statewide technical reference manual.

4 CSR 240-20.093 (2)(H) Throughput Disincentive

In order for energy efficiency to be treated as an energy resource, it must be seen as a good financial, or at least financially neutral, investment from the utility's perspective. While there are numerous ways to achieve this goal,¹ one way is through what is commonly termed the three-legged stool: cost recovery, performance incentives, and

¹ Utilities such as Commonwealth Edison, Ameren Illinois, and AEP Ohio all have decoupling or decoupling pilots. Decoupling separates utilities' revenues from volume of sales. See Illinois General Assembly Public Act 099-0906 and Case Nos. 11-351-EL-AIR, 11-352-EL-AIR, 11-353-EL-ATA, 11-354-EL-ATA, 11-356-EL-AAM, 11-358-EL-AAM before The Public Utilities Commission of Ohio.

lost revenue recovery. The proposed MEEIA rules contain all three. The proposed rules refer to lost revenue recovery as the throughput disincentive component of the DSIM. For both cost recovery and lost revenue recovery mechanisms, annual true-ups are a means of ensuring that ratepayers are only paying for the actual cost of the programs and lost revenue and that the utilities are recovering an appropriate amount.

The following language illustrates how Public Service of New Mexico (PNM, a utility) may treat lost revenue recovery (lost contributions to fixed costs, or LCFC):

“The Lost Fixed Cost Amount is trued up each year to account for the difference between the amount recovered versus that amount that should have been collected based on measured and verified savings. If measured and verified savings were actually lower than projected, PNM will issue credits to customer through the LCFC mechanism.”²

As proposed in the MEEIA rules, it is not clear if the throughput disincentive component of the DSIM will be subject to annual true-ups and how discrepancies in predicted and actual lost revenue are to be treated. Clarification on this issue will help promote transparency and accountability around demand-side energy savings programs.

4 CSR 240-20.093 (7)D(1)B Impact Evaluations

The MEEIA proposed rules call for the following metrics to be included in impact evaluations: lifetime and annual gross and net demand savings and energy savings, program cost-effectiveness test scores according to five named cost-benefit tests, and the portfolio and program benefits as calculated using the Utility Cost Test.

While demand and energy savings as well as cost-effectiveness scores are standard metrics to include in an impact evaluation, additional non-energy impacts may be included in these reports. Non-energy impacts to consider include avoided emissions, reductions in water consumption, job creation, trainees participating in training programs, market shares of new products for market transformation programs, reduced utility customer disconnects, and reduced or increased operations and maintenance costs.^{3,4}

² Direct Testimony of Gerard Ortiz. Case No. 16-00276-UT before the New Mexico Public Regulation Commission. December 7, 2016.

³ Schiller, Steve and Goldman, Charles and Elsie Galawish. *National Energy Efficiency Evaluation, Measurement and Verification (EM&V) Standard: Scoping Study of Issues and Implementation*

4 CSR 240-20.094 (1)(A) Annual Incremental Goals

MEEA supports the inclusion of incremental annual demand-side energy savings goals in the MEEIA rules.

We request clarification as to whether “total annual energy” refers to the energy load served by a utility before or after the customer opt-out, as defined in 4 CSR 240-20.094 (4) – is calculated. In 2013, commercial and industrial electricity consumption in Missouri accounted for 57.7% of total electricity consumption in the state.⁵ Much of this load, however, is eligible to opt-out of utility-provided demand-side savings programs under the existing and proposed MEEIA rules. For this reason, the annual incremental goals would represent differing absolute numbers of kilowatt hours if applied to the total load before or after the opt-out is taken into consideration. The effect of opt-outs and the impact on energy savings goals and reporting of goals can be seen in Appendix A: Opt-Out Impact in Indiana.

Another area for consideration is the market potential studies, which serve as the basis for demand-side savings programs. Market potential studies traditionally include four categorizations of potential energy savings, as illustrated in Table 1.⁶

Requirements. Lawrence Berkeley National Laboratory. April 2011.

<https://emp.lbl.gov/sites/all/files/lbnl-4265e.pdf>

⁴ State and Local Energy Efficiency Action Network. 2012. *Energy Efficiency Program Impact Evaluation Guide*. Prepared by Steven R. Schiller, Schiller Consulting, Inc., www.seeaction.energy.gov.

⁵ *Missouri Comprehensive State Energy Plan*. Department of Economic Development. Division of Energy. October 2015. <https://energy.mo.gov/energy/docs/MCSEP.pdf>

⁶ *National Action Plan for Energy Efficiency (2007). Guide for Conducting Energy Efficiency Potential Studies*. Prepared by Philip Mosenthal and Jeffrey Loiter, Optimal Energy, Inc. www.epa.gov/eeactionplan

Type of Potential	Definition
Technical	The theoretical maximum amount of energy use that could be displaced by efficiency, disregarding all non-engineering constraints such as cost-effectiveness and the willingness of end-users to adopt the efficiency measures.
Economic	The subset of the technical potential that is economically cost-effective as compared to conventional supply-side energy resources.
Maximum Achievable	The amount of energy use that efficiency can realistically be expected to displace assuming the most aggressive program scenario possible. Achievable potential takes into account real-world barriers to convincing end-users to adopt efficiency measures, the non-measure costs of delivering programs (for administration, marketing, tracking systems, monitoring and evaluation, etc.), and the capability of programs and administrators to ramp up program activity over time.
Program/Realistic	The efficiency potential possible given specific program funding levels and designs. In effect, they estimate the achievable potential from a given set of programs and funding. Program potential studies can consider scenarios ranging from a single program to a full portfolio of programs. A typical potential study may report a range of results based on different program funding levels.

Table 1: Categories of Energy Efficiency Potential.

Designing energy efficiency programs based only on realistic achievable potential eliminates cost-effective energy savings. Given that the expectation of an electric utility's demand-side program, as stated in the MEEIA rules, is that it "can achieve a goal of all cost-effective demand-side savings,"⁷ it may be more appropriate to use the greater of the annual *maximum achievable* energy savings as determined through a market potential study or the incremental annual demand-side savings goals as established in the rules.

4 CSR 240-20.094 (3)(A)(4)

MEEA offers the following recommendations to ensure that low-income energy efficiency potential is adequately captured in the market potential study. First, using data from sources beyond the state's new TRM is important as there may be some measures frequently used in low-income programs in other states that have not yet

⁷ 4 CSR 240-20.094 Demand-side Programs. Missouri Register. February 1, 2017. Volume 42, No. 2.

been added to Missouri's TRM. The Illinois Technical Reference Manual⁸ and the Michigan Energy Measures Database⁹ are two recommended sources. The Energy Efficiency for All initiative's potential study is another source.¹⁰

Second, as low-income energy efficiency programs are not required to pass cost-effectiveness tests in Missouri, the market potential study should not exclude energy efficiency measures targeted at low-income communities based on any minimum cost-effectiveness scores.

4 CSR 240-20.094 (3)(B)(4)

While it is not uncommon for utilities to conduct their own market potential studies to inform their demand-side savings programs, MEEA would like to call the commission's attention to the recently passed legislation in Michigan. Enrolled Senate Bill No. 437 authorizes the Michigan Public Service Commission to conduct a statewide energy waste reduction (energy efficiency) potential study as well as "establish the modeling scenarios and assumptions each electric utility should include in developing its integrated resource plan..."¹¹ The new law brings significant transparency to the previously opaque integrated resource planning process and encourages significant stakeholder involvement.

4 CSR 240-20.094 (7)(A)(3)

MEEA supports the language added to this section to ensure that customers qualifying to opt-out have documented energy efficiency plans. However, the following language proposed in the MEEA rules requires additional clarification:

1. *"...and the customer has a comprehensive demand-side or energy efficiency program and can demonstrate an achievement of savings at least equal to those expected from utility-provided demand-side programs."*

What level of savings is required? Is there an assumption that utility demand-side programs would have achieved a certain percentage reduction in energy use?

⁸ Illinois Statewide Technical Reference Manual for Energy Efficiency. Version 6.0 Illinois Energy Efficiency Stakeholder Advisory Group. February 8, 2017.

http://www.ilsag.info/il_trm_version_6.html

⁹ Michigan Energy Measures Database. Michigan Public Service Commission. Accessed April 20, 2017. http://www.michigan.gov/mpsc/0,4639,7-159-52495_55129---,00.html

¹⁰ *Potential for Energy Savings in Affordable Multifamily Housing*. Prepared for the Natural Resources Defense Council by Optimal Energy. Energy Efficiency for All. May 2005. Accessed April 26, 2017.

<http://www.energyefficiencyforall.org/sites/default/files/EEFA%20Potential%20Study.pdf>

¹¹ Section 6f. <http://www.legislature.mi.gov/documents/2015-2016/publicact/pdf/2016-PA-0341.pdf>

Or, must the customer reduce their energy use following the savings schedule established in 4 CSR 240-20.094 (1)(A)?

2. *"...sufficient documentation to demonstrate compliance with these criteria, including the amount of energy savings."*

The only way to demonstrate that the energy savings have been achieved is for the customer to conduct, and submit to the commission, an EM&V report that adheres to the same guidelines and level of rigor required of utility-provided demand-side energy savings programs as set forth in the MEEIA rules.

Michigan and Wisconsin are two states with self-direct programs that may provide useful guidance as the commission considers the requirements for certain customers to qualify under the opt-out provision. Michigan's self-direct program may serve as a valuable guide to the commission as it finalizes the components of the energy efficiency plans that opt-out customers must submit.¹² Wisconsin's large customer energy efficiency self-direct program calls for the Wisconsin Public Service Commission to establish energy savings tracking and reporting requirements for participating customers.¹³ This level of oversight by the utility regulatory commission helps ensure that savings from customers that have opt-out of the utility's energy efficiency programs are realized.

4 CSR 240-20.094 (9)(B)

MEEA supports the establishment of a statewide collaborative in Missouri. Illinois¹⁴ and Michigan¹⁵ have well-established statewide collaboratives that bring stakeholders together outside of a regulatory proceeding to explore innovative ideas, oversee working groups that annually update net-to-gross values and each state's TRM, serve as a platform for input to utility energy efficiency program design as well as tracking achievements throughout the program year, and foster greater collaboration among the utilities, evaluators, implementers, consumer advocates, environmental advocates, and representatives of key customer groups, among others.

¹² Enrolled Senate Bill 213. Section 93 (5). State of Michigan. October 6, 2008. Accessed April 20, 2017. <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0295.pdf>

¹³ Chapter PSC 137. Energy Efficiency and Renewable Resource Programs. PSC 137.09. Wisconsin State Legislature. Register July 2007 No. 619.
https://docs.legis.wisconsin.gov/code/admin_code/psc/137/09

¹⁴ Illinois Energy Efficiency Stakeholder Advisory Group. Accessed April 27, 2017.
<http://www.ilsag.info/>

¹⁵ Energy Efficiency Collaborative. Michigan Public Service Commission. Accessed April 27, 2017.
http://www.michigan.gov/mpsc/0,4639,7-159-52495_53750---,00.html

Based on the success of these collaboratives, MEEA makes the following recommendations:

1. Meetings are held monthly.
2. Meetings are open to the public. The current language identifies “electric utilities and their stakeholders” as the participants. Explicitly denoting that meetings are open to the public may encourage engagement by new actors.
3. Gas utilities are encouraged to attend state collaborative meetings to foster greater gas-electric program delivery coordination.
4. Meetings are facilitated by an independent facilitator selected by the commission (Illinois) or facilitated by commission staff (Michigan).
5. Meetings have in-person and remote access capability.
6. Meeting agenda, notes, presentations, evaluation reports, and other work products presented to or developed by the statewide collaborative are made publicly available (Illinois).

MEEA applauds the commission's desire to adopt a statewide framework for conducting EM&V. In both Michigan and Illinois, the development of annual EM&V reports is overseen by the statewide collaborative. In 2015, MEEA authored the report, *Considerations for a Statewide Evaluation, Measurement, and Verification Framework for Energy Efficiency in Kentucky*, as part of a two-year project with the Kentucky Department of Energy Development and Independence.¹⁶ MEEA provides this report as a reference for the commission as the MEEA rules are finalized. In particular, we would like to direct the commission's attention Appendix C: Example of an EM&V Timeline. The appendix describes the timeline used in Illinois to produce annual utility evaluation reports, including processes for updating the state's technical reference manual and net-to-gross values each year.

4 CSR 240-20.094 (10)

In addition to Missouri, four states in the Midwest – Illinois, Michigan, Minnesota, and Iowa – have developed and regularly updated a state-specific TRM. While the utilities in each of these states retain the ability to submit measure values and algorithms that differ from their statewide TRM, we would like to offer the language adopted in Iowa for consideration by the commission:

“The Board approves of the TRM and its implementation and update processes developed and recommended by the parties in the [Motion for Approval](#) with

¹⁶ Friedman, Julia and Vijaykar, Nikhil. *Considerations for a Statewide Evaluation, Measurement, and Verification Framework for Energy Efficiency in Kentucky*. Midwest Energy Efficiency Alliance. October 2015. www.mwalliance.org/sites/default/files/uploads/MEEA_2015_Considerations-Statewide-EMV-Framework-EE-Kentucky_11-15_FINAL_rev5.pdf

supporting documentation. By doing so, the Board accepts the use of the standard formulas contained in the TRM, as prepared by the TRM developer and reviewed by the TRM Oversight Committee, as the basis for determining savings and cost-effectiveness of energy efficiency programs.”¹⁷

Additionally, MEEA recommends that the commission consider including in the MEEA rules direction as to whether TRM measure values are applied retrospectively or prospectively to inform demand-side energy savings program planning and cost recovery purposes.

To the extent that it may provide assistance, MEEA also offers the commission a reference to the Kentucky TRM Roadmap, which was developed as part of the aforementioned project with the Kentucky Division for Energy Development and Independence.¹⁸

4 CSR 240-20.094 (10)(D)

MEEA supports the suggestion for including an examination of a percentage adder for non-energy benefits into the work of the stakeholder collaborative.¹⁹ The Illinois Energy Efficiency Stakeholder Collaborative has taken on this topic at various points in time in their work as well, although the discussion has focused more on quantification of specific non-energy benefits.²⁰ The recently passed Future Energy Jobs Act, requires Illinois electric utilities to include water savings and operations and maintenance cost reductions in energy efficiency cost-effectiveness tests.²¹ Research by Skumatz Economic Research Associates has quantified the value of numerous non-energy benefits to support the notion that an adder is an appropriate way to recognize that non-energy benefits exist and have a value more than zero in cost-effectiveness tests. Table 2 illustrates which states are using adders in cost-effectiveness calculations.²²

¹⁷ Docket Nos. EEP-2012-0001, EEP-2012-0002, EEP-2013-0001. Department of Commerce. Utilities Board. State of Iowa. March 22, 2017.

<https://efs.iowa.gov/cs/groups/external/documents/docket/mdax/nje4/~edisp/1618024.pdf>

¹⁸ Kentucky Technical Reference Manual Roadmap. Kentucky Department for Energy Development and Independence and the Midwest Energy Efficiency Alliance. August 2016.

<http://www.mwalliance.org/sites/default/files/uploads/Kentucky-TRM-Roadmap.pdf>

¹⁹ Non-Energy Benefits of Energy Efficiency. Midwest Energy Efficiency Alliance. Accessed April 26, 2017. <http://www.mwalliance.org/sites/default/files/uploads/NEBs-Factsheet.pdf>

²⁰ Illinois Energy Efficiency Stakeholder Advisory Group. Total Resource Cost Test Subcommittee. Accessed April 26, 2017. http://www.ilsag.info/subcommittee_ipa-trc.html

²¹ Illinois General Assembly Public Act 099-0906.

²² Skumatz, Lisa A. *Non-Energy Benefits/Non-Energy Impacts and their Role & Values in Cost-Effectiveness Tests: State of Maryland*. March 31, 2014.

Adders for Energy Efficiency Programs	Adders for Low-Income Program
Colorado	Colorado
Vermont	Vermont
Iowa	California
Oregon	Oregon
Washington	Washington
New York	New York
District of Columbia	Utah
	New Hampshire
	Wyoming
	Connecticut
	Idaho

Table 2: States Using Adders To Account For Non-Energy Benefits

Thank you for the opportunity to comment on EX-2016-0334 and we look forward to continuing to engage in the work of the commission to advance energy efficiency in Missouri. Please contact Julia Friedman, Senior Policy Manager, at 312-784-7265 or jfriedman@mwalliance.org with any questions.

Sincerely,



Stacey Paradis
Executive Director
Midwest Energy Efficiency Alliance

Appendix A: Opt-Out Impacts in Indiana

This table illustrates the impact that Indiana's opt-out policy has on total energy savings. In Northern Indiana Public Service Company, Vectren, and Duke's territories, the opted-load represents a significant amount of the total retail energy sales.

Utility	Annual Savings as a Percentage of Total Load After Opt-Out	Annual Savings as a Percentage of Total Load After Opt-Out
Duke	0.68%	1.02%
Indiana Michigan Power	0.78%	0.92%
Indianapolis Power & Light	0.87%	0.92%
Northern Indiana Public Service Company	0.65%	1.52%
Vectren	0.71%	1.17%

Source: Indiana utility EE plans & integrated resource plans. Note: Where data was not directly given in utility plans, values were estimated from available data.