

Missouri Statewide Evaluation Measurement and Verification Protocols

Introduction:

Missouri has established, within the Code of State Regulations, 4 CSR 240-20.094(9)(B), the following:

(B) State-Wide Collaborative.

1. Electric utilities and their stakeholders shall formally establish a state-wide advisory collaborative. The collaborative shall—

A. Develop statewide protocols for evaluation, measurement, and verification of energy efficiency savings, no later than December 31, 2018, and update those protocols annually thereafter;

A Utility-specific collaborative, Missouri Energy Efficiency Advisory Collaborative (MEEAC) was established, as part of this requirement. A working group was established within MEEAC to address the requirement to develop statewide evaluation, measurement, and verification (EM&V) protocols consisting of:

- Missouri Public Service Commission Staff (Staff)
- Office of Public Council (OPC)
- Division of Energy
- Kansas City Power & Light/Greater Missouri Operations (KCP&L/GMO)
- Ameren Missouri

With these rules, and working group, in place, the collaborative has worked together discussing the path that will be followed to develop "statewide" EM&V protocols for use when assessing Energy Efficiency (EE) savings. The Statewide Protocol has been developed by the MEEAC working group to be used as a guide for conducting evaluation research for MEEIA programs when the existing assumptions impacting EE savings may be in need of updating. The group has met and discussed the multiple protocols that are already present, such as the Uniform Methods Project (UMP) that have been developed as part of a Department of Energy initiative. These protocols, which apply to EM&V, were qualitatively assessed for applicability and vintage. The working group ultimately settled on an approach for protocol selection, with an optional approach to use should no applicable protocols exist. The application of these protocols should be commensurate with the value of the research findings relative to the level of effort and cost involved in EM&V and generally proportionate to the impacts of the program(s) to the EE portfolio as a whole.

It should be noted that although the protocols establish standardized methodologies for assessing savings associated with energy efficiency programs, the savings results that are ultimately observed within any specific service territory may differ from those achieved in other service territories. This is due to differences in demographics, customer usage characteristics, differences in weather patterns, etc. The

protocols are designed to take these characteristics, and other pertinent characteristics, into account when determining savings of energy efficiency measures and programs.

Protocol Selection Methodology:

The order of preference for selection of available and applicable EM&V protocol is:

- Uniform Methods Project (UMP). Vintage – Current. The U.S. Department of Energy describes the establishment of the Uniform Methods Project with the objective as identified in their abstract:

" the U.S. Department of Energy Uniform Methods Project to bring consistency to energy savings calculations in U.S. energy efficiency programs. The U.S. Department of Energy (DOE) is developing a framework and a set of protocols for determining gross energy savings from energy efficiency measures and programs. The protocols represent a refinement of the body of knowledge supporting energy efficiency evaluation, measurement, and verification (EM&V) activities. They have been written by technical experts within the field and reviewed by industry experts. Current EM&V practice allows for multiple methods for calculating energy savings. These methods were developed to meet the needs of energy efficiency program administrators and regulators. Although they served their original objectives well, they have resulted in inconsistent and incomparable savings results - even for identical measures. The goal of the Uniform Methods Project is to strengthen the credibility of energy savings determinations by improving EM&V, increasing the consistency and transparency of how energy savings are determined. "

- International Performance Measurement & Verification Protocol (IPMVP). Initial vintage 2002, is updated by Efficiency Valuation Organization (EVO). The IPMVP was the original source of protocols for EM&V.

"The International Performance Measurement and Verification Protocol (MVP) provides an overview of current best practice techniques available for verifying results of energy efficiency, water efficiency, and renewable energy projects."

- National Action Plan for Energy Efficiency (NAPEE). Vintage 2007

"The National Action Plan for Energy Efficiency was a private-public initiative to create a sustainable, aggressive national commitment to energy efficiency through the collaborative efforts of gas and electric utilities, utility regulators, and other partner organizations." The "Model Energy Efficiency Program Impact Evaluation Guide " "... is provided to assist gas and electric utilities, utility regulators, and others in the implementation of the recommendations of the National Action Plan for Energy Efficiency (Action Plan) and the pursuit of its longer-term goals.

This guide describes a structure and several model approaches for calculating energy, demand, and emissions savings resulting from facility (non-transportation) energy efficiency programs that are implemented by cities, states, utilities, companies, and similar entities. By

using best practices and consistent procedures, evaluations can support the adoption, continuation, and expansion of efficiency programs. "

- State and Local Energy Efficiency Action Network (SEEAAction). Vintage Current The Evaluation, Measurement, and Verification section of SEE Action "is the collection of approaches for determining and documenting energy and non-energy benefits resulting from end-use energy efficiency activities and programs."

Approach to Follow When No Applicable Protocols Exist:

In the absence of an existing protocol, the third party utility EM&V contractor will collaborate with the Missouri Commission Auditor (Auditor), other currently active third party EM&V contractors and peer EM&V contractors, such as members of the International Energy Program Evaluation Conference (IEPEC), to arrive at an agreed upon protocol for addressing the EM&V issue at hand. Once a protocol has been agreed upon, the new protocol should be added to the pool of Missouri EM&V protocols.

Conclusion:

This approach to addressing the requirement for establishing Missouri statewide EM&V protocols accomplishes positive outcomes as follows:

- 1) Ensures that the protocols that will be referenced and used are consistent with those used throughout the United States.
- 2) Drive protocol selection to the Department of Energy's UMP, which comprised the most up-to-date versions of EM&V protocols that are being utilized.
- 3) Minimizes the additional costs and duplication of effort that would be associated with developing a set of protocols for Missouri that would ultimately be duplicative to those that have already been established in nationally recognized archives.

Future Activities:

Concerning the pool of Missouri EM&V protocols: Each utility should identify and develop a list of the protocols that are being utilized within their EM&V work and reports, and that list of protocols should be appended to the Missouri Statewide Evaluation Measurement and Verification Protocols as references to the preferred protocols that are being followed by utilities within Missouri.

Differences in protocol selection for equivalent measure/program EM&V analysis between utilities should be identified by the MEEAC, with resultant comparison and ultimate decision regarding the appropriateness of varying approaches or the ultimate selection of a single protocol to follow for the EM&V assessment.

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