

BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of Protocols for the  
Measurement and Verification of Energy  
Efficiency and Peak Demand Reduction  
Measures.

Case No. 09-512-GE-UNC

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Joint Proposed Protocols for the  
Measurement and Verification of Energy  
Efficiency and Peak Demand Reduction Measures

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By Entry dated June 24, 2009, the Public Utilities Commission of Ohio (“Commission”) established a procedure for the development of protocols for the measurement and verification of energy efficiency and peak demand reduction measures in the form of a Technical Reference Manual (“TRM”) (the “June 24<sup>th</sup> Entry”). This Entry directed Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company (together “FirstEnergy”); Columbus Southern Power Company and Ohio Power Company (together “AEP Ohio”); Duke Energy Ohio (“Duke Energy Ohio”); and The Dayton Power and Light Company (“DP&L”), together with FirstEnergy, AEP Ohio and Duke Energy Ohio, the “Electric Utilities”) to collaborate and attempt to reach consensus on proposed predetermined values and protocols for the regulated electric industry, and file such values and protocols on September 15, 2009 (the “Initial Submission Date”).

On September 3, 2009, the Electric Utilities filed a joint motion for expedited consideration to extend the Initial Submission Date to October 15, 2009. The Electric Utilities explained that additional time was necessary to address the significant number of separate measures and programs; work to obtain and include stakeholder input; and

jointly file a quality consensus document. By Entry dated September 10, 2009, the Commission approved the Electric Utilities' joint motion for expedited consideration ("September 10<sup>th</sup> Entry").

In compliance with the Commission's June 24<sup>th</sup> and September 10th Entries, this filing includes the Electric Utilities' procedure for the development of protocols for the measurement and verification of energy efficiency and peak demand reduction measures in such format provided by Commission Staff, and herein referred to as the Technical Reference Manual or "TRM". The TRM attached hereto as Exhibit 1 and incorporated herein, includes:

1. Predetermined energy savings and demand reduction values and calculation assumptions for specific electricity efficiency deemed measures and deemed calculated measures, when such values can be defined with a reasonable level of certainty, including applicability conditions.
2. Custom measure protocols consisting of standard engineering calculations and/or other methods that are used for determining energy savings and/or peak-demand reductions for electricity efficiency measures that do not have applicable predetermined savings values.
3. Verification procedures that electric utilities will utilize to confirm both baseline conditions, when appropriate, and the proper installation of energy efficiency measures for which energy savings and/or peak-demand reductions claims will be made.
4. Protocols and assumptions for determining cost effectiveness parameters, other than energy savings and demand reductions, used in the total resource cost test and utility cost test for calculating the cost effectiveness of energy efficiency programs undertaken by the electric utilities.

The TRM sets forth savings algorithms and values based on measured and derived data either directly, or as input values from industry-accepted algorithms. The data and input values for the algorithms originate from several sources including ENERGY STAR® standards, data gathered by the Electric Utilities, or information available

through other publically available sources, including the Pennsylvania Technical Reference Manual<sup>1</sup>.

The standard input values were derived from one or more of the following factors: 1) best available measured or industry data<sup>2</sup>; 2) review of literature from industry organizations and/or equipment manufacturers or suppliers; and 3) past measurement and verification studies performed by certain electric utilities. Such standard input values also reflect current federal and state codes. The Electric Utilities believe that collectively the aforementioned data represent a reasonable starting point for assigning deemed savings, or deemed algorithms for estimating program savings.

The TRM, in large part, represents a consensus among the Electric Utilities as to appropriate predetermined values and protocols at this time, which are expected to change over time. As the Commission recognized in its June 24<sup>th</sup> Entry, the TRM will likely continue to evolve as measures and protocols are added, refined, and updated over time. The TRM is also a product of stakeholder input, as each of the Electric Utilities submitted a draft of this TRM to their respective Collaborative for review and feedback.

The Electric Utilities reached a consensus on a vast majority of predetermined values and protocols, including an appropriate predetermined value for one-time

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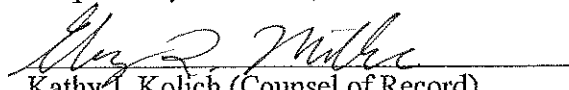
<sup>1</sup> "Annex: Technical Reference Manual (TRM) for Pennsylvania Act 129 Energy Efficiency and Conservation Program and Act 213 Alternative Energy Portfolio Standards." Pennsylvania Public Utility Commission, May, 2009. From Implementation of the Alternative Energy Portfolio Standards Act of 2004: Standards for the Participation of Demand Side Management Resources – Technical Reference Manual Update, Docket No. M-00051865.

<sup>2</sup> The following third party consulting firms were consulted for this manual: 1) Building Metrics Inc., 2) Franklin Energy Services, LLC, 3) Summit Blue Consulting, LLC, and 4) The Cadmus Group, Inc.

incremental capital replacement costs and for the initial incremental capital costs for periodic investments. However, the Electric Utilities firmly believe that actual costs for these components should be used when available. The Electric Utilities were unable to reach a consensus on how to establish the series of predetermined values for subsequent periodic incremental capital replacement costs or certain incremental operation and maintenance costs. The Electric Utilities after much discussion believe that these specific components are wholly company and program specific.

The Electric Utilities appreciate the opportunity to present the attached TRM which is the product of considerable time and resources on the part of both the Electric Utilities and their respective collaboratives. The Electric Utilities respectfully request the Commission to incorporate the form and substance of their Technical Reference Manual into the 2010 TRM adopted by the Commission.

Respectfully submitted,



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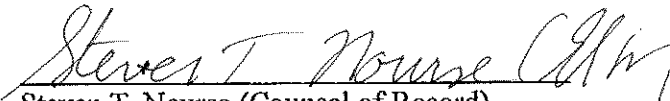
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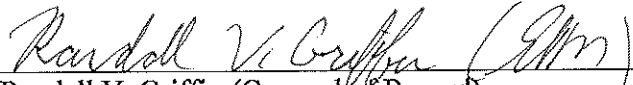
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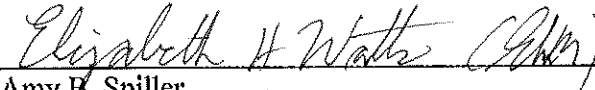
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Summary: Application Joint Proposed Protocols for the Measurement and Verification of Energy Efficiency and Peak Demand Reduction Measures electronically filed by Ms. Ebony L Miller on behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company, The Toledo Edison Company and Columbus Southern Power Company, Ohio Power Company and The Dayton Power and Light Company and Duke Energy Ohio