TO: NAESB DSM-EE Retail Energy Efficiency Working Group

FROM: Alliance to Save Energy, U.S. Department of Energy, Efficiency Valuation Organization, and Northeast Energy Efficiency Partnerships

SUBJECT: Comments on NAESB Retail Electric Quadrant Business Practice Standards for Measurement and Verification of Energy Efficiency Programs (Version 030712a2)

DATE: 16 April 2012

Dear Working Group,

The signatories to these comments have extensive professional expertise in energy efficiency program development, impact evaluation, measurement and verification as well as protocol development. Moreover, some of us participated in the development of ISO-NE’s and PJM’s M&V Manuals for the Forward Capacity Market as well as the NAESB Wholesale Standards. Informed by this combined experience, we make the following suggestions for modifications to the current draft. Given the point at which this draft is at, as well as the time that has gone into this effort, we limit our comments to those we consider the most substantial and which are most important for the successful application of the document.

Our primary concern with the current version is that it be aligned with standard practices within the energy efficiency and evaluation, measurement and verification industry. REQ.19.1.2 indicates “This document is intended to provide general M&V guidance, *and is intended to create consistency* across retail and wholesale markets, where appropriate and applicable.“ NAESB is new to the energy efficiency and retail energy fields as well as to measurement and verification practices. However, there is an existing industry with 30 years of practice and with, while sometimes conflicting, standardized terminology and common practices. For NAESB to introduce all new terms and practices would be counter to the intent of REQ.19.1.2.

Thus, the areas we have identified are as follows.

**REQ.19.1.3**

Change:

Without limiting the reference to M&V for these Model Business Practices, the term M&V is sometimes used more narrowly in the industry to define the application of certain methods for determining site-specific savings.

**To**

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**REQ.19.3.1 Measurement and Verification Methodologies**

The current draft references the four IPMVP options. Unfortunately it gives the four IPMVP options new titles and defines the options differently than the way in which they are defined by the IPMVP. We would suggest modifications to correct these discrepancies.

IPMVP defines widely accepted terms and procedures for determining and reporting the savings created by an energy end user’s efficiency project. IPMVP’s 2010 edition is now published in eight languages, and is downloaded for free at an average rate of well over 500 copies per month, has been translated into eight languages, and has a quickly growing group of Certified Measurement and Verification Professionals, who are certified in its use (numbering about 2,000 now). It is also almost universally referenced in energy efficiency measurement and verification protocols used by utilities and other entities to define savings documentation requirements.

We thus believe it is very important for a NAESB retail energy efficiency guidance document to reference the IPMVP, but that it needs to be done correctly. We say this with an understanding that in the NAESB Wholesale M&V standard, reference is made to IPVMP options, and this is language that got cut and pasted into the retail document, but with truncated descriptions from the ISO-NE M&V manual. The ISO-NE manual presented the Option A-D M&V methods (without referencing IPVMP options) and had decided to “tweak” the definitions for its own purposes.

As noted above, in the current retail draft (Version 030712a2) IPMVP options A-D are indicated, but with titles and descriptions for each option that are not completely consistent with the IPMVP definitions. Allowing this can cause great confusion as there would be a NAESB definition for the M&V Options and IPMVP definitions; and IPMVP has about a 20 year head start with thousands and thousands of practitioners and many more times that applications.

The actual IPMVP option titles and summaries are:

**A. Retrofit Isolation: Key Parameter Measurement**

Savings are determined by field measurement of the key performance parameter(s) which define the energy use of the Energy Conservation Measure’s (ECM’s) affected system(s) and/or the success of the project. Measurement frequency ranges from short-term to continuous, depending on the expected variations in the measured parameter, and the length of the reporting period. Parameters not selected for field measurement are estimated. Estimates can based on historical data, manufacturer’s specifications, or engineering judgment. Documentation of the source or justification of the estimated parameter is required. The plausible savings error arising from estimation rather than measurement is evaluated.

**B. Retrofit Isolation: All Parameter Measurement**

Savings are determined by field measurement of the energy use of the ECM-affected system. Measurement frequency ranges from short-term to continuous, depending on the expected variations in the savings and the length of the reporting period.

**C. Whole Facility:**

Savings are determined by measuring energy use at the whole facility or sub-facility level. Continuous measurements of the entire facility’s energy use are taken throughout the reporting period.

**D. Calibrated Simulation:**

Savings are determined through simulation of the energy use of the

whole facility, or of a sub-facility. Simulation routines are demonstrated to adequately model actual energy performance measured in the facility. This Option usually requires considerable skill in calibrated simulation.

We recognize that neither the ISO-NE or PJM M&V Manuals, nor the NAESB wholesale M&V standard will be changed based on our comments. However, we do hope the retail Model Business Practices can indicate the correct IPMVP options and that this will be acceptable to all Thus, we’d strongly suggest that either:

* Preferred option: the IPMVP options be properly referenced, with titles and descriptions (perhaps shortened) in REQ.19.3.1 consistent with International Performance Measurement and Verification Protocol Concepts and Options for Determining Energy and Water Savings, Volume 1, EVO 10000 – 1:2012, pp. 17-18 ([www.evo-world.org](http://www.evo-world.org))
* Secondary option: the IPMVP Options be referenced by name (Option A, Option B, etc.), but without descriptions, and that a reference is made to IPMVP for definitions and details.

**REQ.19.3.2.2 Energy Efficiency Baseline Conditions**

We are not sure what the first sentence is intending to indicate; “The baseline should reflect the conditions under which new Energy Efficiency equipment or processes are installed to provide a service function.” However, we suspect it is something to the effect of:

*The baseline should reflect the conditions under which new Energy Efficient equipment or processes are implemented to provide a level of service equal to or better than what occurs in the baseline.*

**Definitions**

We have the following recommended changes to the definitions currently identified to be in the MBP document.

For energy efficiency, we would suggest:

*The use of less energy to provide the same or an improved level of service to the energy consumer; or the use of less energy to perform the same function.*

This simpler definition that what is currently drafted is from the NAPEE Guide and is conceptually the same as what was proposed but does not limit energy efficiency to “installed measures” and thus include changes in operations, processes, control strategies, behavior programs, etc.

There is the following definition for “demand reduction value”:

*Measurement of reduced electricity usage by a Demand Resource during a Demand Response Event or Energy Efficiency performance hours, generally expressed in kilowatts or megawatts.*

We are not sure of its use but indicated “measurement” when the MBP allows deemed savings and it references “usage” when we think it means demand.

We continue to be concerned with the definition and use of the term “M&V” in the MBP, and the potential confusion in the industry. But we have accepted that the term is sometimes used as a catch all term by some in the working group for a range of impact evaluation activities (not only M&V on a single-site facility/project as used in IPMVP and other efficiency industry guidance documents), and have agreed to the clarifying introductory language in the MPBs, with appropriate citing of other EM&V guidance documents largely used and reference by the industry. To that effect we suggest introducing in the document that DOE is working on more detailed recommendations and EM&V approaches with a link to the SEE Action EM&V site as the place those resources will be available: <http://www1.eere.energy.gov/seeaction/evaluation.html>

We hope this feedback is useful and acceptable to the group.

Respectfully Submitted,

Kevin Warren – Working Group Co-Chair

Julie Michals - NEEP, Working Group Co-Chair

Rodney Sobin - Alliance to Save Energy, Working Group Co-Chair

Steve Kromer - Board of Directors, EVO

Steve Schiller -Board of Directors, EVO

Carla Frisch – Office of Energy Efficiency and Renewable Energy, US DOE

Michael Li - Office of Electricity, US DOE