



January 12, 2009

Executive Committee  
North American Energy Standards Board  
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**Re: Business Practices for Wholesale DR M&V**

Dear Executive Committee,

The Efficiency Valuation Organization has made suggestions in the development of NAESB's proposed Business Practices for A Framework for Measurement and Verification of Wholesale Electricity Demand Response. We also submitted formal comment on the draft and participated in parts of the recent DSM-EE Committee meeting finalizing what you now have before you. We hope our further comments, herein, are understood in their intent to constructively improve the guidance. Though aimed at ISOs and RTOs, we believe this document will ultimately direct developments for all North American energy users.

Our vantage point is global standardization of M&V methods for energy efficiency (EE) activities. EVO is the owner of the International Performance Measurement & Verification Protocol (IPMVP), the widely referenced guide on methods of M&V for the EE community. IPMVP defines terms and a framework for M&V in the EE field. Many utilities already specify IPMVP's use for evaluating end use energy savings. IPMVP is the basis of the Model Energy Efficiency Program Impact Evaluation Guide produced by the US NAPEE process. (See also "IPMVP Citings" in EVO's Library at [www.ev-world.org](http://www.ev-world.org), for a list of other specifications of the use of IPMVP for measuring and reporting energy savings.)

M&V for EE involves the same end user and much of the same meters and information as used by DR. DR's focus on a short demand window does not change the physical realities of equipment and metering, or the nature of baselines, adjustments or the mathematics of computing end user savings. So we believe that many of the people who implement DR are already involved with EE, since the two are so closely linked.

We understand NAESB also intends to next publish some guidance on measuring energy efficiency. So we believe that **harmony of terminology** between IPMVP's EE guidance and

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NAESB's DR guidance would significantly assist understanding. However we find new terminology in this first DR document, for similar concepts to those in IPMVP. Though we know the DR and EE disciplines have emerged somewhat independently, we believe **now is the time to harmonize terms**. Otherwise:

- it will be difficult for EE folk (already familiar with IPMVP) to use DR concepts, and
- NAESB's future guidance on EE (presumably using IPMVP terminology) will use different terms than its own DR guidance, for similar concepts.

We don't believe you intend either outcome. That is why early in your process for this document we offered IPMVP methods and terms to help shape the proposed DR guidance. We hoped that IPMVP language could have been used (or at least referenced) wherever possible.

The draft document before you shows very little similarity with IPMVP terms, so we urge further refinement to harmonize terminology wherever possible. None of this should change the fundamentals already approved by the committee. We have already submitted to the committee a table cross-referencing IPMVP terminology and NAESB's draft:

NAESB WEQ	IPMVP
Baseline Window	Baseline Period
Performance Window	Reporting Period
Performance Evaluation Type	Option
Baseline	Adjusted Baseline
Baseline Adjustment	Routine Adjustment
Demand Reduction Value	Avoided Energy Use or Demand
Event day adjustments	Non-routine adjustments

The DSM-EE Committee was advised that our terminology recommendation was out of scope. Though there was understanding amongst committee members of the need to harmonize EE and DR terminology, the meeting could not quickly do the word-smithing to accept our suggestion.

So we **now recommend replacement of the above defined terms** in NAESB's document with IPMVP's (or at least addition of a footnote to each definition, mentioning the associated IPMVP term). We are happy to help NAESB customize IPMVP definitions for DR purposes.

**On a more general level**, we have remained involved with NAESB's process not only to seek harmonization with EE and IPMVP terms and methods, but also to give NAESB the benefit of our experience in **clearly describing seemingly simple concepts**, like savings. Though your primary audience for the current draft is ISOs and RTOs, we believe it sets up a structure that will have wider application. Even ISOs and RTOs need to be able to clearly understand the model rules for unambiguous application in program design.

We have learned that lack of clarity leads users to interpretations which sometimes subverted our intent. It has taken us four editions, and its not perfect yet, to:

- express basic concepts several ways: text, graphics and equations.
- structure the document to allow the basic concept to clearly shine through. Such structuring minimized repetition, though each IPMVP Option had similar elements, and set up Chapter and section headings to make it easy to find basic concepts and related detail.
- at least refer to bodies of other relevant knowledge that we did not want to duplicate, such as statistics and uncertainty analysis, to constrain excessive user misapplication.
- ensure it is clear what is needed in an M&V Plan or Savings Report. We developed a distinct Chapter on report contents, so that users can readily find their “deliverables” by inspecting the table of contents).
- develop illustrative examples.

We offer three general recommendations:

1. *Highlight and reinforce the basic concepts.* For example, Figure 2 depicts the role of the baseline in computing Demand Reduction Value. However there is no explanation of how to activate the concept. The System Operator is empowered to define all computations. But surely there is some basic common process for all evaluation types, such as:

$$\text{Demand Reduction Value} = \text{Baseline} - \text{Performance Window data} \\ \pm \text{Event Day Adjustments}$$

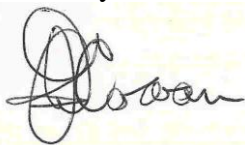
Such basic relationship explains the role of some of the defined terms (and the Figure), and reminds Operators of the need to consider Event Day Adjustments.

2. *At least refer to all issues that might arise in planning a DR program.* For example, we recommend addition of guidance on the cost tradeoffs associated with managing errors created by sampling or regression. Such inclusion in the first edition may be as simple as, “Program design should consider both the uncertainties introduced by M&V sampling, analysis and estimates, and the costs of managing such uncertainties.” Such statement constrains Operators in setting rules which may be either too costly or too inaccurate for their purposes. Subsequent editions can give more explicit guidance.
3. *Summarize the contents of suitable M&V Plans and reduction reports.* Every Operator will need to define its documentation requirements, so guidance in this area by NAESB seems as fundamental as a Glossary.

We recognize that these general recommendations are not specific suggestions and require more fundamental editing than the process seems to have allowed to date. Nevertheless, we hope you regard EVO's three general recommendations as helpful to the further evolution of this document or a related guidance document.

We hope these terminology and general suggestions are taken in their constructive intent. EVO stands by to continue dialogue in this important field.

Sincerely,



John Cowan P.Eng.  
Chair