MEMORANDUM

TO:	STAKEHOLDER ADVISORY GROUP
FROM:	SHAWN ENTERLINE, PROJECT MANAGER - VEIC
SUBJECT:	TRM MAINTENANCE & UPDATE PROCEDURE (DRAFT)
DATE:	11/18/11
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Before we make our draft recommendations for a TRM Maintenance and Update Procedure, we thought it would be helpful to provide a definition of what a TRM is, and then give you a brief overview of how we plan on organizing them. While some of this may be repetitive to what the team has already incorporated, we have presented the basics in this memo to provide a commonality of language and definition so that as we move forward on a collaborative team, we are addressing these issues with the same terminology.

DEFINITION & ORGANIZATION OF A TECHNICAL REFERENCE MANUAL

Technical Reference Manuals contain a list of all the energy efficiency <u>measures</u> that are being implemented by a <u>Program Administrator,</u> in this case the distribution utilities and the DCEO. Although they have many components, measures are primarily made up of algorithms (equations) that calculate the amount of energy that is saved by adopting a particular technology. Measures can be <u>custom</u> or <u>prescriptive</u>, meaning that some of them can be standardized and others have to be applied on an individual basis. The <u>portfolio of measures</u> is compiled into a TRM that is organized by <u>market</u> and <u>end-use technology type.</u> Some examples of market and technology types include:

Examples of Markets	Examples of End-Use Technology Types
Residential	Lighting
Commercial	Efficient Motors
Industrial	Refrigeration
New Construction	HVAC Systems
Retrofit	Agricultural Equipment
Low Income	Energy Star Products

Different combinations of market and technology type often have different efficiency <u>programs</u> that are designed to encourage that market to <u>adopt the efficient technology faster</u>. For instance, programs can be designed to encourage adoption of the technology at the <u>point-of-sale</u> by offering a rebate coupon, which is a common way of encouraging customers to adopt retail items like compact florescent light bulbs and ENERGYSTAR qualified products. Programs can also be designed to work with <u>midstream</u> players in the value chain such as big box retailers, who can often be persuaded to stock more ENERGYSTAR products with a more modest incentive than would be required at the point-of-sale. Finally, programs can also be targeted at <u>upstream</u> players in the value chain like the manufacturers themselves, who can be encouraged to design and manufacture more efficient products.

MEASURE CHARACTERIZATION AND TRM UPDATE PROCEDURES

A TRM Update and Maintenance Procedure provides a standardized process for reviewing individual measures to ensure that their algorithms are accurate as technology and underline baselines change over time. The term 'measure characterization' is used to describe the analysis that is conducted to describe all of the necessary algorithms and variables that are required to determine a measure's energy savings and cost effectiveness. The components of a measure characterization include the algorithms that calculate energy and demand savings (kwh, kw, therms) as well as all of the inputs to those equations such as the choice of baseline technology, the measure life (years), persistence factors, measure costs, operations and maintenance costs, and various savings adjustment factors such as freeridership and spillover. A measure characterization compiles all of these inputs into a standardized format.

Measure characterizations may need to be updated for a variety of reasons, and ideally should be updated whenever a major input to the energy saving algorithm changes. This can happen in response to a number of factors including the availability of new technologies, changing baselines such as changes in the energy code or overall building code, changing measure costs and any other market factors identified by the independent auditors.

IMPLEMENTING THE TRM MAINTENANCE AND UPDATE PROCEDURE

Because of the evaluation requirements in the enabling legislation, the TRM update and maintenance procedure can be linked to the annual evaluation process. The annual evaluations can serve as a priority setting mechanism that identifies individual measures that need the most maintenance based on their contribution to overall energy efficiency savings. The other natural choice would be to link the procedure to the more in-depth program evaluation that is required every three years. In this case, a more comprehensive review of the measures in the TRM would be appropriate.

The selection of the frequency of the update procedure represents a tradeoff between accuracy and the stability of program planning. Because planning is already taking place on a 3-year cycle and Program Administrators need some certainty that the programs they are implementing will result in the required energy savings, we recommend adopting individual measures for three-year terms before they are subject to being updated. However, once the portfolio of measures has existed for three years, we recommend updating individual measures after they are flagged by an independent evaluator as part of the annual evaluation process. Also as technologies become available that can increase the effectives of an energy efficiency program, the measure should be added to the existing TRM so that the benefits can be quantified and captured in the on going program.

As described earlier, TRMs are organized not only by technology but also by the type of program that delivers the measures. As a result, portfolio level and program design considerations need to enter into the maintenance and update procedure. When enough high-impact measures change, the structure and design of the portfolio of measures may need to change with them. Programs take a significant amount of lead time to design and implement and often involved creating long-term relationships with players in the various markets. As a result, we recommend that this level of maintenance and update take place in conjunction with the 3-year planning cycle, and not be subject to annual changes or updates. To sum up, we have three recommendations for implementing the TRM Maintenance and Update Procedure.

Recommendation 1: Adopt individual measures for three-year terms before they are subject to being updated.

Recommendation 2: Update individual measures are they are flagged as part of the annual evaluation process or proposed as new technology measures.

Recommendation 3: Update the portfolio and programmatic organization of the TRM in conjunction with the 3-year planning cycle.

DRAFT TRM MAINTENANCE AND UPDATE PROCEDURE

The TRM Maintenance and Update Procedure itself is a fairly straightforward process of reviewing all of the analytical components of the measure characterization while incorporating a transparent stakeholder engagement process. We will plan to engage you in a conversation on this topic using the following draft of the steps in this process. After we have gathered your input, we will revise it for use in Illinois.

1. The annual review process flags and prioritizes measures for update and/or identifies new measures.

2. Initial Technical Assessment

   - Identify the reasons why a measure(s) should be updated – e.g. Did the baseline shift? Did costs decrease or increase?

   - Identify the specific inputs to the measure characterization that will be modified, considering the fact that that not every value of the measure characterization may need to be evaluated and modified.

   - Run a sensitivity analysis on the proposed change(s) to inform the question, "How much does the change in this input(s) change the energy savings and cost effectiveness of the measure?"

   - Assess the impact of the measure on the full portfolio performance in terms of annual and/or cumulative savings by utility.

   - Rank the importance of each measure that is identified by the annual review to develop priority list by utility.

3. Stakeholder Engagement to review and agree on priority list

   - Are the measures chosen the most important for the measure update cycle?
   - Are there any new measures that are important enough to the portfolio's performance that it should be characterized?

4. Re-characterize the measure and release the draft results to the stakeholders.

   - Follow the established framework for updating the measures that was established in Step 3.
   - Document all assumptions and include references.

5. Gather Stakeholder Input in the Draft Measure

   - Are the assumptions clear and values appropriate?
   - Is this an appropriate level of effort for the savings involved?
   - Revised and re-release the measure based on stakeholder input.
   - Reengage the stakeholders to review a second draft of the measure(s).
   - Finalize the update measure characterization and include it in the TRM.
   - Program administrators can now use the measure to claim savings.

The following graphic describes the above process. Please note that after the stakeholder engagement, we have not populated the process steps. This is due to the fact that procedurally, the SAG has to determine the best steps as a group rather than specific utilities. Those decisions will be incorporated into the overall process once finalized.   Once the TRM update process is defined, the mechanism for pushing the information into the TRM has to be determined. This can be via the word document and flat file methodology or can be expanded to include a web based delivery if the SAG would like to explore that option (Appendix A of VEIC proposal).

Process Step	Details
Annual review process	• Existing measures flagged for update • New measures identified
Initial Technical Assessment	• Identify reasons measures should be updated • Identify specific inputs of the measure characterization that will be modified • Run sensitivity analysis and assess impact of measures on portfolio
Stakeholder Engagement	• Are the measures chosen the most important for the measure update cycle? • Should there be new measures characterized?
Measures re-characterized	• Within pre-established framework, measures are updated • Assumptions well documented • References noted
Stakeholder engagement	• Are the measures chosen the most important for the measure update cycle? • Should there be new measures characterized?
Comments accepted and measures revised	
Stakeholder engagement	
Measures revised and finalized	
TRM updated	