

Michigan Energy Waste Reduction Collaborative: Provisional Deemed Savings Proposal

Cherish Smith (Navigant), Joe Forcillo (Consumers Energy) and Manish Rukadikar (DTE Energy)

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Agenda

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- 2 Proposed Michigan Provisional Framework
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While the MEMD update process has many strengths, the current process for introducing and managing emerging technologies could be improved to be more consistent, transparent, and reliable.

Some limitations of the current process for utilities and stakeholders include:

- Some risk of insufficient investment of dollars and time to properly research and analyze emerging technologies' savings potential which may affect the MEMD's quality standards and/or result in inaccurate savings estimates.
- The potential for different utilities to use inconsistent methodologies to calculate savings for similar emerging measures that are not yet in the MEMD.
- Technology developers and vendors do not have a clear path to market adoption for emerging measures not in the MEMD.
- Customers may miss deeper energy savings due to slower adoption of effective emerging measures.
- The MPSC and other stakeholders need to ensure that emerging measures still under initial evaluation are a limited percentage of existing portfolios

These factors increase risk and pose barriers for optimal evaluation and adoption of emerging technologies into their DSM portfolios.

The Energy Optimization Collaborative has identified concerns about measures not meeting the quality standards of the MEMD. The Provisional Deemed Savings Framework would formalize the process for flagging these measures.

The following two examples could have benefitted from having a Provisional Deemed Savings Framework in place:

1. Residential Smart (Tier III) Thermostats

- The EO Collaborative indicated proxy savings from other states was not sufficient to meet the quality standards of the MEMD. However, the measure was included in the 2016 MEMD regardless.
- The EO Collaborative called for a near-term calibration plan to validate savings for these measures, however, calibration has not yet occurred.

2. Smartphone Behavior App

- The EO Collaborative expressed concern over savings based on billing analysis of less than 12 months of participant billing data. However, the measure was added to the 2016 MEMD anyway.
- The EO Collaborative called for near-term calibration using participants with at least 12 months of data. This measure was calibrated and updated in the 2017 MEMD.

→ The Provisional Deemed Savings Framework would allow the EO Collaborative to accept these measures in the MEMD on a *provisional* basis while clearly defining the necessary funded calibration research with a specific deadline for updating the deemed savings.

A Provisional Deemed Savings Framework can address the MEMD's current limitations and encourage new measure adoption by minimizing risk and uncertainty.

Definition

“Provisional” is a term used to describe something that is arranged or implemented to fulfill a short-term need, possibly to be modified at a later time when a more suitable solution can be identified

- The current Michigan Energy Measures Database (MEMD) update process can follow only two paths: (1) reject the new measure, or (2) accept the new measure as *proven*.
 - For measures with considerable uncertainty, but also considerable potential, a third option may be beneficial.
 - The Provisional Deemed Savings Framework introduces a middle option where the new measure is accepted on a *provisional* basis, allowing utilities to move ahead while necessary research can be funded and performed.
- New measures with medium to high uncertainty in the savings estimate could be included in the MEMD with a **“provisional”** status, pending calibration.
 - The “provisional” deemed savings in the MEMD would be supported by preliminary evaluation results and/or engineering estimates.
 - Measures assigned the “provisional” status would require funded calibration research with a specific deadline for updating the deemed savings.

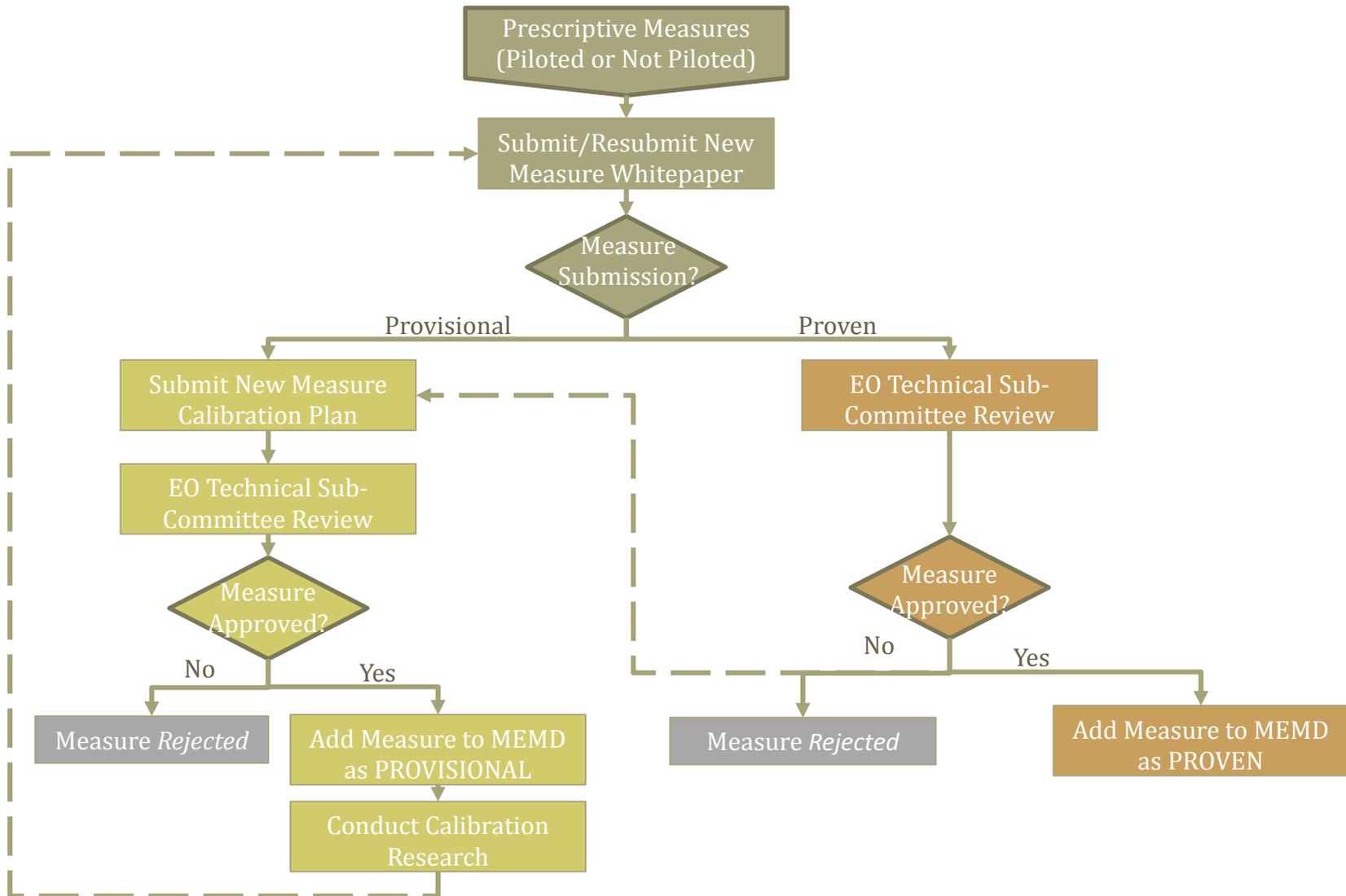
Provisional measures are distinctly different from *custom* measures.

- The *Provisional* designation refers to measures that, if supporting research is completed, would be included in the MEMD.
- The *Custom* designation refers to measures that are non-standard technologies or projects. Due to their unique nature and/or small scale deployment, custom measures are not included the MEMD.
- *Provisional* and *Custom* measure categories serve distinctly different purposes, described below:

CATEGORY	DESCRIPTION
Provisional	The <i>Provisional</i> measure category would apply to measures whose unitized savings, e.g., savings per lamp, is stable (mean and variance) and can (with additional data) be reliably estimated across multiple sites. <i>Provisional</i> measures will be deployed on a large enough scale to support standard savings estimates.
Custom	The <i>Custom</i> measure category is more appropriate to estimate savings which would be difficult to standardize across multiple sites due to their unique nature, small scale deployment and variability in savings across sites.

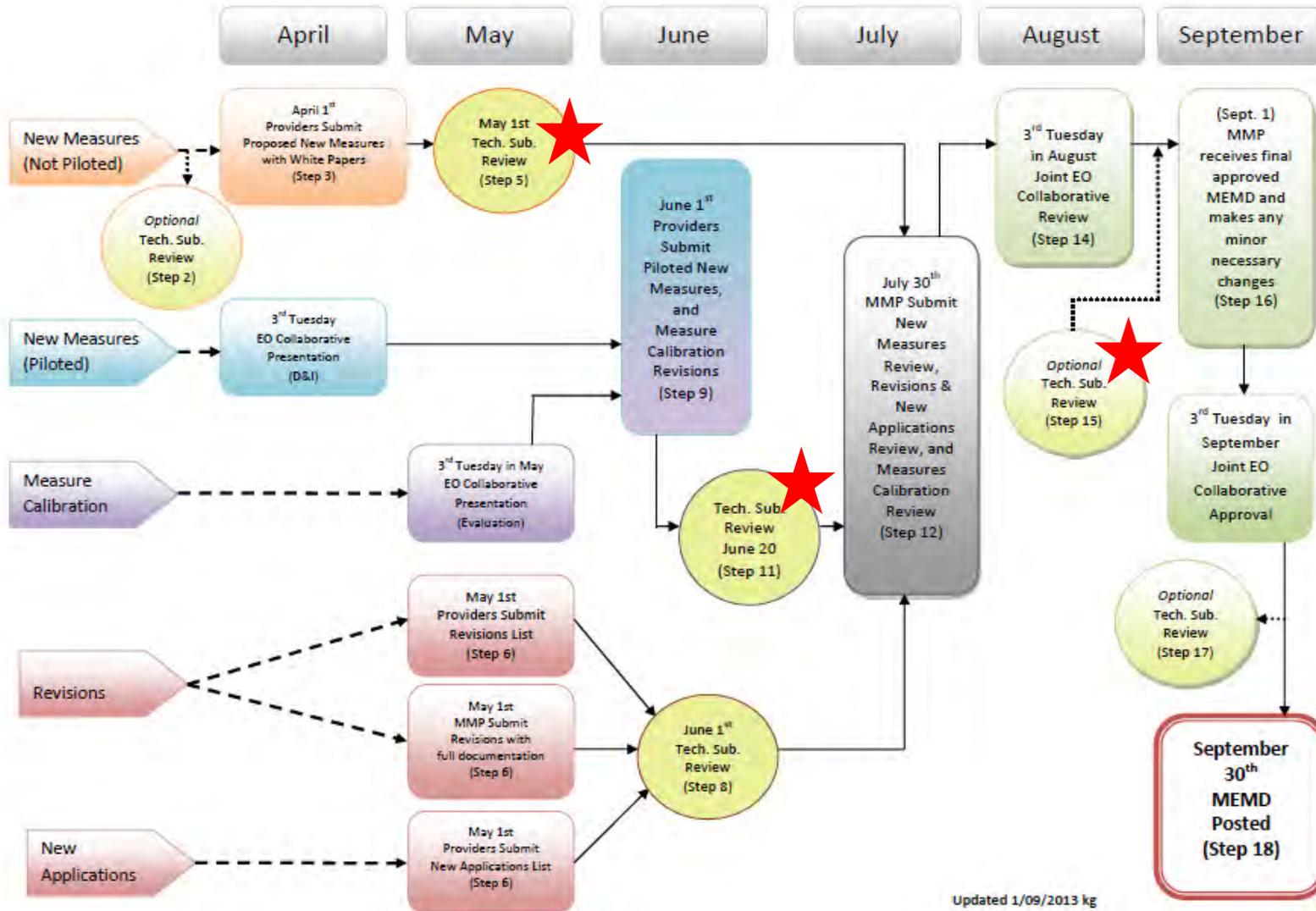
The MEMD technical sub-committee will review technical whitepapers to determine if new measures should be assigned a *provisional* or *proven* status.

FIGURE 1: PROPOSED NEW MEASURE CLASSIFICATION PROCESS



The existing MEMD update process could easily accommodate adoption of this framework.

FIGURE 2: MEMD Update Process



* The technical sub-committee reviews status (provisional or proven) and research plans (if applicable) in Steps 5, 11 or 15.

The Regional Technical Forum (RTF) in the Pacific Northwest has demonstrated success with a Provisional Deemed Savings Framework.

- The RTF maintains a database of cost-effective energy efficiency measures, similar to the MEMD, screens new measures for technical viability and cost effectiveness, and assists in developing technology assessments and program evaluation designs.
- The RTF has identified several key criteria critical to the success of the Provisional Deemed Savings Framework.
 - Provisional is a term applied to measures that require further research.
 - The RTF is confident there is medium to low risk in categorizing the measure as Provisional because the savings estimate is supported by preliminary program evaluation results and/or reasonable engineering estimates.
 - The RTF requires an approved and funded research plan be developed before they accept a provisional measure; research plans must including the following components:
 - Expected completion dates and data/information needed to move provisional measures to the “Proven” category
 - Sample design (sampling frame, domains of study, stratification, quotas, selection method, replacement procedure and expected sampling precision) to be used for any new data collection efforts
 - Description of how new and existing data will be used to develop sufficiently reliable estimates of measure savings or to prove the reliability of a savings estimation method
 - If the research has not been completed by the deadline or if it does not adequately address the information gaps identified, then the measure is either made inactive, or re-reviewed with a revised research plan.

To adopt the Provisional measure category, the EO Collaborative should consider implementing several key requirements in the approval process.

- **Reasonable preliminary savings estimates.** The EO Collaborative should be confident Provisional measures have low to medium risk in the savings estimate provided to date, and are supported by reliable research studies and/or savings estimation methods.
- **Approved and funded calibration study.** The EO Collaborative should set standards for a calibration plan to be approved by the group prior to categorizing a measure as Provisional.
- **Established sunset date.** The EO Collaborative should establish a sunset date or date in which a Provisional measure would be deactivated if the measure sponsor does not complete calibration research or meet a significant research milestone.
- **Limitations on savings contribution to portfolio.** The EO Collaborative should establish a maximum savings threshold that provisional measures may contribute to utility portfolios. This will minimize risk associated with provisional measures.
- **Clear measure category definitions and standards.** The EO Collaborative should establish clear definitions and standards for provisional and proven measure categories. This will help minimize the risk of classifying a large majority of new measures as provisional, which would cause an increase in associated costs, and will ensure the appropriate use of this category.

DTE Energy and Consumers Energy recommend the EO Collaborative adopt a provisional deemed savings framework, building upon the framework developed by the RTF, and tailoring it to Michigan based on feedback from the EO Collaborative.

Next Steps

- EO Collaborative to discuss whether or not to move forward with a provisional deemed savings framework.
- If the EO Collaborative is interested in establishing a Provisional framework for the 2018 MEMD update process, we recommend the following next steps:
 - DTE Energy, Consumers Energy and their evaluators further develop and propose a process and criteria for defining and deeming savings as Provisional.
 - EO Collaborative reviews, finalizes, and approves Provisional deemed savings framework.