Michigan Energy Optimization Collaborative: Provisional Deemed Savings

Presentation to Energy Optimization Collaborative

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DTE Energy

Consumers Energy
Count on Us

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Agenda

1. Background
2. Proposed Michigan Provisional Framework
3. RTF Provisional Framework Overview
4. Next Steps

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.

In past efforts to incorporate emerging technologies, the EO Collaborative has identified concerns about measures falling short of the MEMD quality standards.

- Residential smart (Tier II and Tier III) thermostats were added to the 2016 MEMD; savings estimates were based on a limited number research studies from other states.
- **Due to the high potential savings contribution of residential smart thermostats to the utility portfolio, the EO Collaborative determined proxy savings from other states were not sufficient to meet the MEMD quality standards and called for establishing a near-term calibration plan to validate savings for these measures.**
- Behavior measures were added to the 2016 MEMD; deemed savings were based on a billing analysis of less than 12 months of participant billing data.
- **Due to concerns regarding the limited amount of data, and the potential impact to savings accuracy, the Collaborative requested that the measure be calibrated for the 2017 MEMD using participants with at least 12 months of data.**
- **Calibration research for both the thermostat and behavior measures would require an investment and significant participation over a long enough period of time to garner meaningful results.**

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

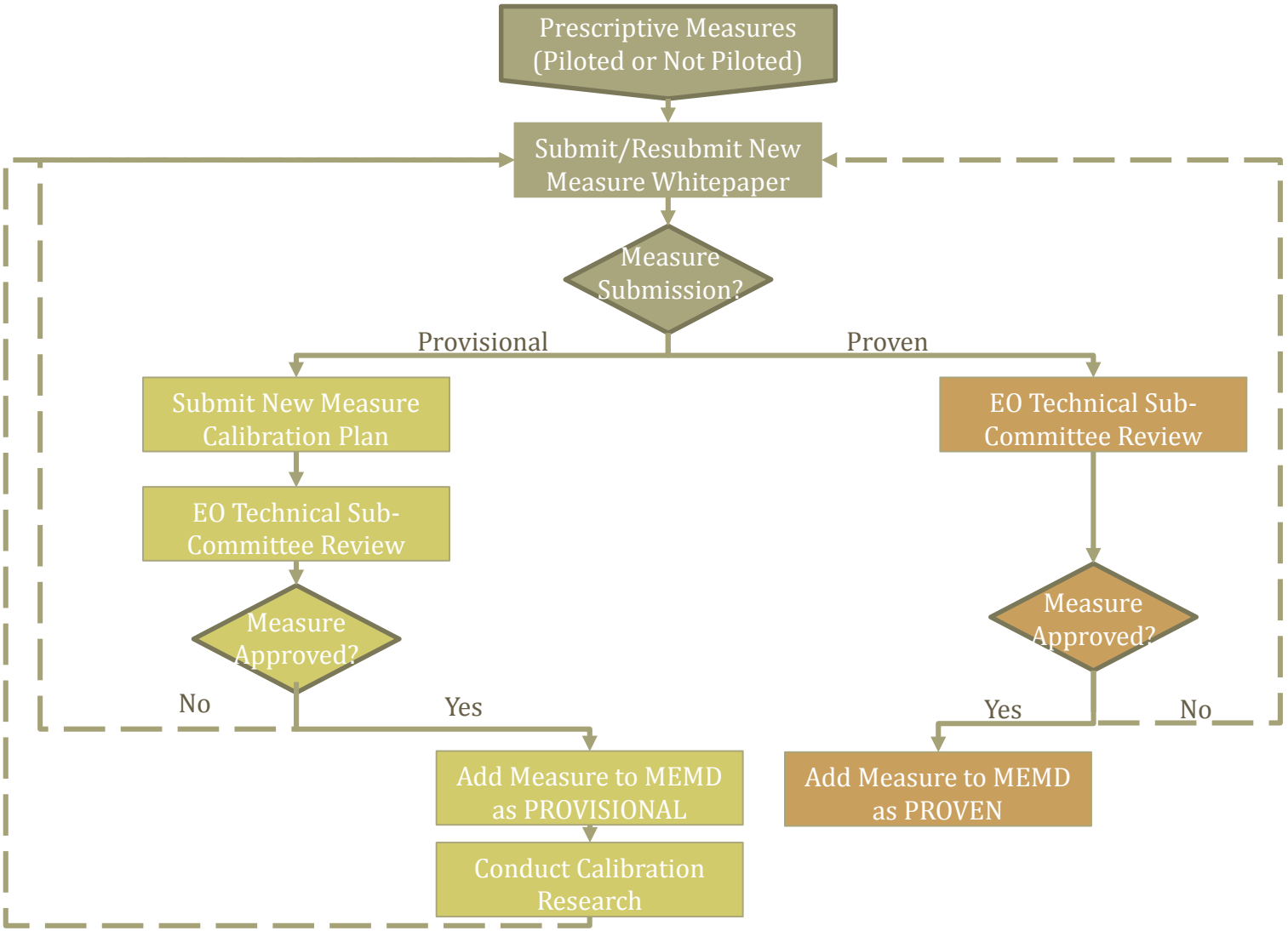
Definition

"*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

- 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.

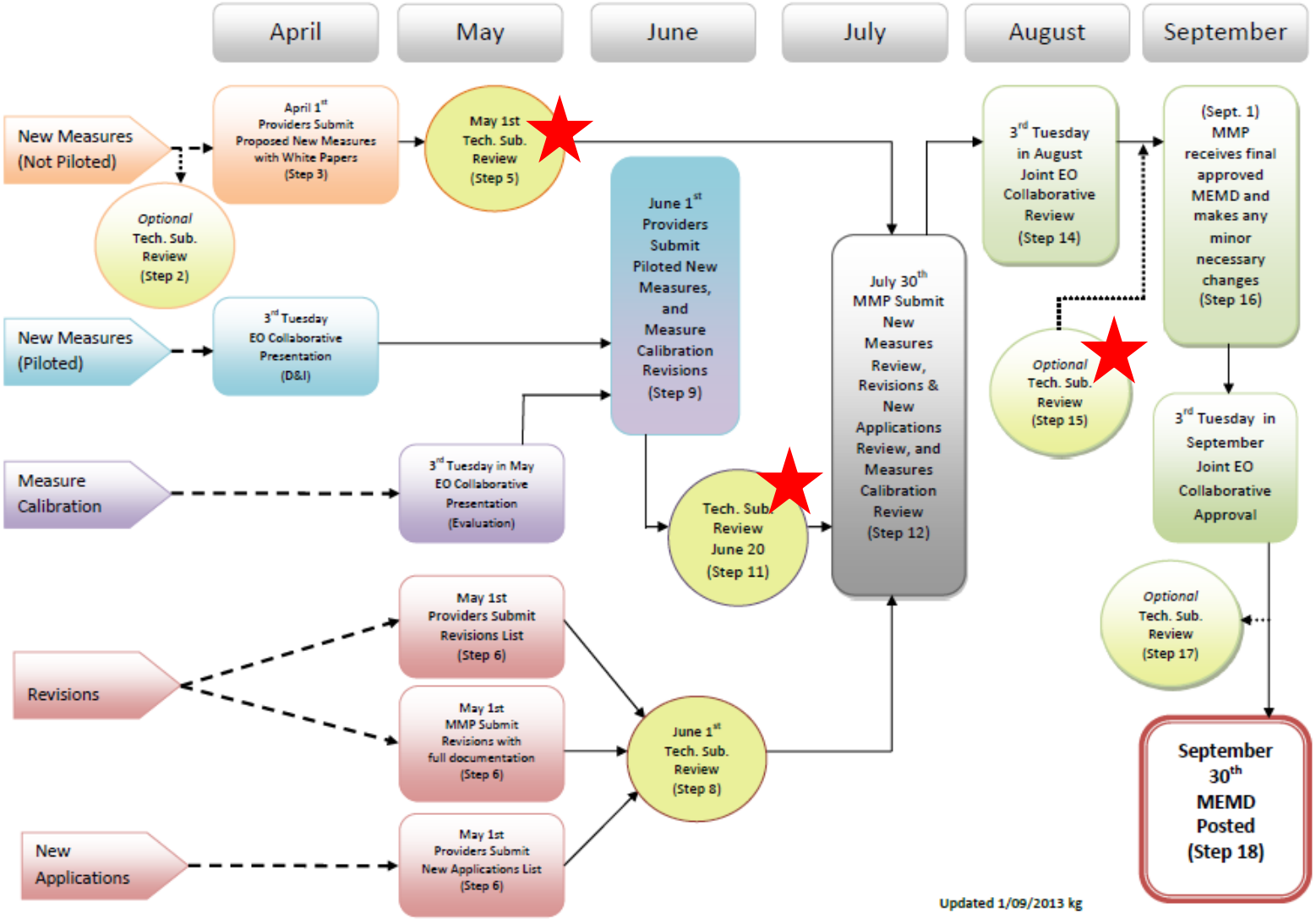
The MEMD technical sub-committee will review technical whitepapers to determine if new measures should be "provisional" indicating further calibration research is required or "proven" and ready for adoption.

FIGURE 1: 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. [Target deadline: Today]
- If the EO Collaborative is interested in establishing a Provisional framework for the 2017 MEMD update process, we recommend the following next steps:
  - DTE Energy and Consumers Energy further develop and propose a process and criteria for defining and deeming savings as Provisional.
    [Target deadline: January 19 EO Technical Sub-Committee]
  - EO Collaborative reviews, finalizes, and approves Provisional deemed savings framework.
    [Target deadline: February 16 EO Collaborative Meeting]
- If the EO Collaborative is interested in taking additional time, we could establish steps and a timeline to align with the 2018 MEMD update process.