

Attachment 1:

Proposed Revisions to the Technical Resource Manual and Deemed Savings Table

- This Attachment describes proposed revisions to the Technical Resource Manual ("TRM") and Deemed Savings Table. These documents were submitted as part of the Ameren Missouri 2019-2021 MEEIA Cycle, later extended for 2022, 2023, and 2024, as Appendix F (Deemed Savings Table) and Appendix G, H, I (TRM Volumes 1-3), on October 25, 2018 in EO-2018-0211 and approved on December 5, 2018. Ameren Missouri previously requested:
 - A TRM revision on 12/31/2018 approved by the Commission on 2/27/2019.
 - A TRM revision on 11/15/2019 approved by the Commission on 12/11/2019.
 - A TRM revision on 6/19/2020 approved by the Commission on 7/08/2020.
 - A TRM revision on 10/16/2020¹ approved by the Commission on 11/12/2020.
 - A TRM revision on 9/15/2021 approved by the Commission on 9/29/2021.
 - A TRM revision on 9/27/2022² approved by the Commission on 10/12/2022.

The primary purpose of this update is to incorporate Evaluation Measurement & Verification (EM&V) results from the 2022 program year. In addition, this revision also includes updates to multiple measures, based on feedback from the evaluation contractor, Opinion Dynamics Corporation ("ODC"), and the program implementation teams. Formatting and editing updates are also included for consistency. A description of these changes is provided below. The measure changes have been analyzed for cost effectiveness and the goals of the portfolio will not be adjusted.

¹ A correction was filed on October 29, 2020.

² A correction was filed on September 28, 2022.

To aid in Stakeholder review, all updates are included in the TRM and Deemed Savings table in track changes with redlines. Within the Microsoft Excel workbook that serves as the basis for the Deemed Savings tables, this includes:

- New changes included in red text.
- Modifications to existing text in red and strikethrough (~~change~~).
- A revision change log included in columns "V" through "YY" denoted input values by applicable revision date.

Revisions based on PY2022 Results:

Updated to reflect plan year 2022 evaluations results, as provided by Opinion Dynamics. Applicable input values have been updated within the MEEIA 2019-21 Deemed Savings Table (appendix F) and corresponding TRM (Appendix G, H, & I). Examples include updates to items such as the following:

- Inputs to algorithms: Various inputs to the engineering algorithms used by the evaluator to calculate first year savings are updated based upon program tracking data and surveys. Examples of these updates can include variables such as In Service Rates and heating and cooling capacities and efficiencies.
- Updated TRC tables (*Benefits 2019 \$*) calculation to reference 2022 avoided cost benefits and aligns with the PY24 MEEIEA approved extension.

New Measures/Updates to Existing Measures

- Updated Residential and Business lighting baselines to align with EISA policy of a 45 lumen/watt efficiency effective 8/1/2023.
- Updated HVAC baselines for heat pumps to CFR standards, with a TRM effective date of 1/1/2024.
- Updated deemed incremental costs of light bulbs to reflect first year cost per bulb.
- Added Pay As You Save[®] (PAYS[®]) program specific measures with In-Service Rates developed from the PY2022 evaluation and tracking data.
- Added a default building code of IECC 2012 (through 12/31/2023) and IECC 2015 (effective 1/1/2024) for any custom project where local code is not defined and updated commercial HVAC Chiller, ASHP, and Unitary equipment baselines to reflect IECC 2015 building codes effective 1/1/2024.
- Added a section better defining climate zones by county to Appendix G.
- Renamed the "24/7 lighting" coincidence factor "exterior 24/7 lighting" in Appendix H, since 24/7 interior lighting (e.g., exit signs) falls within the indoor lighting coincidence factor.
- Added two new business measures to Appendix F covering VSD Air Compressor for units between 40 and 200-hp.
- Added a Multi-Family version of a water heater wrap measure to the Income Eligible tab and a handheld showerhead measure to the Multi-Family Market Rate tab in Appendix F.
- Added placeholders for potential Winter demand Response measures, Water heater switches, and EV chargers to Appendix F.

Clean-up items

- Updated Refrigeration RES Coincident Peak Factor in the Deemed Savings Table "CP Factors" tab to match the factor in Appendix G.
- Corrected a few instances where Household Factor either was or was not being applied appropriately to an Air Source Heat Pump capacity size in the "HVAC" tab. The Household Factor adjusts a capacity of a Single-Family unit downward to an appropriate level for a Multifamily unit, where actual data is not available.
- A table was added to the "Measure Index tab" in Appendix F to calculate a weighted average savings for HVAC measures that have an "Early Replacement" and "Replace on Fail" version of the same measure.