

State of California

Memorandum



Date: 08/08/2023

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CC: Leanne Hoadley

From: Peter Biermayer P.E., Utilities Engineer, EE Planning & Forecasting Section, Energy Division, CPUC

Subject: Disposition Approving Ductless Heat Pump, Residential – Measure Package SWHC050-03

1. Discussion and Direction

The California Public Utilities Commission (CPUC) approves the statewide measure package for Ductless Heat Pump, Residential – SWHC050-03. This is a revision to an existing measure package SWHC050-02, updated mid-cycle because of a change in the federal minimum efficiency standard and a change in the efficiency metric used by the federal standard. This necessitated updating the base case and measure case efficiency values to conform to the updated metrics. SWHC050-03 will become effective 90 days after approval. The effective date for this measure package is November 8, 2023.

2. Measure Package Summary

In addition to the updated base case and measure case values to SEER2 rated equipment per the federal code, other updates were made because of requirements in Resolution E-5152. Additional key updates to SWHC050-03 are listed below.

Key updates include:

- Adopted DEER energy impacts and updated calculations to EnergyPlus v5 models and the incorporated CZ2022 weather data.
- Added data collection requirements in upstream delivery channels.
- Adopted a SEER-to-SEER2 crosswalk for SEER2-rated units to align with the updated federal code.
- Updated material and labor costs.

3. Critical Review Issues

All updates were completed in accordance with CPUC policy and guidance. In the migration to the EnergyPlus model for SWHC050-03, the model was calibrated with the most recent 2019 Residential Appliance Saturation Study (RASS) results¹. SWHC050-03 is run with CZ2022 weather data. SWHC050-03 resulted in increased electric savings because of these updates.

¹ <https://www.energy.ca.gov/data-reports/surveys/2019-residential-appliance-saturation-study>