

State of California

Memorandum



Date: 8/15/2023

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Subject: Disposition Approving Ductless HVAC, Residential, Fuel Substitution – Measure Package SWHC044-03

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## 1. Discussion and Direction

The California Public Utilities Commission (CPUC) approves the statewide measure package for Ductless HVAC, Residential, Fuel Substitution – SWHC044-03. This is a revision to the existing measure package SWHC044-02, 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. SWHC044-03 will become effective 90 days after approval. The effective date for this measure is November 13, 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 SWHC044-03 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**

In the migration to EnergyPlus model for SWHC044-03, the model was calibrated with the most recent 2019 Residential Appliance Saturation Study (RASS) results<sup>1</sup>. Additionally, the model for SWHC044-02 is run with CZ2010 weather data and the model for SWHC044-03 is run with CZ2022 weather data. SWHC044-03 resulted in decreased gas savings and increased electric savings. SWHC044-03 is a fuel substitution measure package, therefore the gas savings are becoming less positive, and the electric savings are becoming less negative.

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