

# MEMORANDUM



**Date:** November 24, 2021

**To:** Jay Bhakta, Southern California Edison (SCE); Andres Fergadiotti (SCE); Ed Reynoso, San Diego Gas & Electric (SDG&E); Brian Johnston, Southern California Gas Company (SCG); Dragon, Danielle, Pacific Gas & Electric (PG&E); Liu, Henry (PG&E); Anders Danryd, (SCG); Alok Singh (SCE); John Zwick (SDG&E); Nancy Goddard, PacifiCorp

**CC:** Paula Gruending, CPUC; Jennifer Kalafut, CPUC; Pete Scala, CPUC

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

**Subject:** Refrigerant Avoided Cost Calculator (RACC)

## CPUC Staff Guidance:

- Program Administrators (PAs) are required to submit an addendum with the RACC for existing measure packages that add refrigerant amount or type by December 10, 2021. These include fuel substitution measures and electric water heater to heat pump water heater measures. (An RACC Addendum guidance document is attached with more detailed discussion.)
- PAs are to use the attached RACC spreadsheet for submitting the addendum with any new measure packages that require a refrigerant calculation until the CPUC provides further guidance after the CPUC RACC is modified in the future.

## Background:

- The most current version of the RACC developed as part of the Integrated Distributed Energy Resources (IDER) proceeding is version RACC 1b.
- RACC 1b, did not meet the needs of PAs submitting measure packages and was therefore modified.
- These modifications or enhancements do not contradict the official RACC 1b version.
- The RACC is required to be submitted as an addendum to existing measure packages where there is a change in refrigerant type or amount.
- The requirements for the RACC addendum are based on the Decision D.21-05-031, which requires refrigerant be taken into account by January 1, 2022.

- These will be any fuel substitution measures using refrigerant such as heat pumps.
- Also included are any measures where a heat pump replaces electric resistance heating.
- RACC enhancements include:
  - Mapping the measure types to the Air Resources Board (ARB) device names in the calculator
  - Adding a per unit capacity, typically “tons of heating or cooling” to conform with the Cost Effectiveness Tool inputs.
  - A method to accommodate accelerated replacement measure application types
  - A template to provide RACC information as part of the addendum. (see attached RACC Addendum v1)
  - Also submit the RACC with the values for the measure package