CPUC Comments on SWHC050: Ductless Heat Pump, Residential

Lead PA: SCE

Workpaper Submittal Date: 09/04/2020

CPUC Review Date: 09/18/2020

CPUC will reach out to set up a call to discuss below.

|  |  |
| --- | --- |
| CPUC Comment | PA Response |
| Page 3, first paragraph, third bullet: “ Ductless air-conditioner providing cooling only OR combined with electric wall furnace for heating (Ductless AC). “  It should be made clear that the AC only measure would have no gas heating. If there are any gas heating sources, then the measure would be a fuel-sub measure. | Yes, gas heating measures are not allowed in this workpaper. Deleted “only OR” to avoid confusion.  The last paragraph in that section clarifies that fuel substitution measures are not eligible in this workpaper. |
| CEE have different Tiers and different HSPF values compared to CEC (see link below). How do DEER2020 definitions compare with CEE Tiers? Also, please provide a link to the CEC tiers.  <https://library.cee1.org/system/files/library/9570/CEE_ResHVAC_CAC_ASHP_Specifications_1January2015.pdf> | SEER15, 16, 17 and 18 tiers were used to be consistent with the approved fuel substitution workpaper SWHC044-01-Ductless HVAC - Fuel Substitution, Residential. |
| NR – How do you plan to implement the conversion from RAC and electric resistance to DHP?   * Baseboard electric resistance will also need to be decomissioned – see comment * One-off projects? | The workpaper requires the implementer to collect the existing HVAC type (room unit or ductless unit). Because Title-24 restricts use of electric resistance space heater, the savings for room units (room AC and room HP) would be the savings over a code complaint room HP.  We understand it is not conventional to track equipment type for NR measures. If implementer cannot track the existing HVAC type, the savings shall be defaulted to replacing less efficient ductless. |
| The current workpaper does not offer SEER 19, 20, 21 – is this planned for future versions of the workpaper? Although the measure case description says meet or exceed the SEER values shown below, there’s no clear mentioning of above 18 to 21 SEER. There is also no reference to the higher SEER in the EAD tables or the eQuest models provided. | It is correct that this workpaper does not cover higher SEER values. SCE is working on another workpaper to cover these higher SEER values, because of distinct data and modeling needs. SCE is expecting to submit this new workpaper in November 2020. |
| There are model discrepancies we would like to discuss over a phone call. | DEER residential prototypes have various configurations of building types (example SFm prototypes have houses for (2) different orientations and (2) levels), (5) thermostat settings, several vintages and HVAC capacity varying by climate zone. Post processing steps must be applied to normalize the savings from these effects. Please refer to the calculation methodology in the workpaper for post processing steps of MASControl3 output. Please reach out to us for any questions. |
| Two speed stages used for Tier 1. The capacity are virtually the same though, which shouldn’t make a difference. However, for clarity it makes sense to use a single speed/stage. | The DEER convention for modeling single speed/stage is to use this combination of capacity fractions, which makes the coding in the prototype simpler and applicable to all tech runs. |