CPUC Comments on SWWH017-02 Hot Water Pipe Insulation, Non-Residential and Multifamily

Lead PA: SCG

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| CPUC Comment | PA Response |
| EnergyImpact Tab: "Any" building location ID not found in PEAR. | “Any” is an allowed building type in READI.    Since “Any” isn’t allowed in CEDARS, when used in claims, we will identify building location based on zip code on the record and use that CZ with the claim. This is how claims are reported for measures that are submitted with “Any” building type on the workpaper, for example food service workpapers where savings don’t vary on climate zone. |
| "Any" tech group ID is not a valid ID found in PEAR. The "WaterHtg\_eq" for water heating equipment group would be appropriate for this measure. | After reviewing Technology Groups in READI, “Any” TechGroup in Cost table will be fixed to “LiquidCirc”, instead of “WaterHtg-eq” as suggested. “PipeIns” belongs to “LiquidCirc” and “SteamCirc” TechGroups (TankIns belongs to WaterHtg\_eq tech group).  Please let us know if this is not correct. |
| The data in the Cost EAD table is not organized in the standard order. The Table as submitted, shows missing IDs from the several table fields including "VersionSource", "NormUnit", "UseCategory", UseSubCategory", "TechType", "MeasAppType", and "LaborRate" fields. Please rearrange the Cost EAD table to match the standard order. | This was left over from the prior revision. The formatting has been fixed. |
| What annual hours of operation is used to estimate energy impacts for multifamily buildings (common areas)? | Multifamily uses the same non-res impacts hours of operation of 6,333 hours/year.  In the WP is stated that “single value – the average of the annual hours of operation estimated for industrial facilities – was adopted for this measure.”  While 8760 hours would be more appropriate for MFmCmn application, increasing to 8760 would provide approximately 35% more savings and require separate calculations. Let us know if this should be changed to 8760. |
| In the example calculations presented in the workpaper, there are several typos or errors:  The pipe surface temperature for the in the free convection, Rayleigh Number formula on page 12 is incorrectly listed as 135.3°F instead of 135.45°F, for hot water pipe. This error appears again in the heat transfer coefficient due to radiation formula and heat loss for bare pipe on page 13.  The thermal conductivity of air at ambient conditions variable in the derivation of the heat transfer coefficient due to convection formula is incorrectly listed as 0.1457 (btu/hr-ft-°F) instead of 0.01457 (btu/hr-ft-°F). | These have been fixed. |
| The savings source workbook referenced in the UES Inputs table, page 10, references the old source. This should be version 5 of the WPSCGWP110812A workpaper, not version 4. | This has been corrected |
| EneryImpacts Tab – It does not appear to show the added impacts for Multifamily? Should there be new line items for MF measures? | Multifamily uses the same energy impacts as Com, Ag and Ind. In Measure tab, the same measure IDs are repeated four times for four different sectors, Com/ Ag/Ind/Res. They all use the same energy impacts on the energy impact tab.  The narrative explains “To simplify the analysis and minimize inaccurate assignment of project applications to the wrong building type, a single value – the average of the annual hours of operation estimated for industrial facilities – was adopted for this measure. This value is reasonable and close to the average operating hours across all three facility types.”   |  |  | | --- | --- | | Building Type | Hours | | Small Commercial | 7003 | | Large Commercial | 6056 | | Industrial | 6333 | |
| Coversheet: Please express the following as an estimate of the % change due workpaper revision. | The value expressed in “therms” is changed to %. |

Please note responses to comments in the table below, revise workpaper, and upload the entire package to the WPA. If needed, please reach out to Workpaper Review Team to set up a call to discuss.