

## Memorandum #3

Date: October 1, 2019

To: Energy Efficiency Branch, Energy Division, California Public Utilities Commission

From: Jay Madden, P.E., Senior Engineer, Southern California Edison

Subject: Statewide Workpaper SWFS007-02, Insulated Hot Food Holding Cabinet, Summary of Available Data Review – Holding Cabinet

On January 11, 2019, the CPUC issued “Non-standard Disposition for the Insulated Hot Food Holding Cabinet statewide workpaper SWFS007-01.” This memo addresses Energy Division’s direction in the disposition, paragraph 3.1 to summarize findings and conclusions from our research, and provide rationale for baseline and measure requirements.

After gathering the primary and secondary data presented in Memos 1 and 2, baseline efficiencies and eligibility requirements were reformulated and updated in the revised work paper.

- Representative cabinet volume was left unchanged at 10 ft<sup>3</sup> and 25 ft<sup>3</sup> for half- and full-size cabinets, respectively, with the FSTC and CEC sources showing similar average volumes.
- The idle energy rate for baseline cabinets was updated based on the average between the FSTC and CEC databases, normalized per cabinet volume. The idle energy rate for efficient cabinets was updated based on the average between the CEC and ENERGY STAR databases, normalized per cabinet volume. Given the preceding up-to-date laboratory and field analyses, Frontier Energy recommends revising the statewide workpaper for electric insulated holding cabinets to reflect the values presented in Table 1.
- The operating hours for HFHCs were changed for all cabinet volumes from 15 hours/day to 9 hours/day to correspond to the recommended assumptions by Frontier Energy.

*Table 1: Recommended Workpaper Assumption Updates for Hot Food Holding Cabinets*

Source	Cabinet Volume (ft <sup>3</sup> )	Idle Energy Rate (kW)	Normalized Idle Energy Rate (W/ft <sup>3</sup> )	Operating Hours (h/day)	Operating Days per Year
Baseline Holding Cabinet – Half	10	0.35	35	9	365
Baseline Holding Cabinet – Full	25	0.62	25		
Energy Efficient Holding Cabinet – Half	10	0.18	18		
Energy Efficient Holding Cabinet – Full	25	0.30	12		

A distinction in the revised workpaper requires that the both the baseline and energy efficient holding cabinets must have an electric resistance heating element. This will prevent passive holding cabinets with no heating element from qualifying for rebates.

HFC configuration changes were not recommended, and as such, no adjustments to the calculations were warranted based on configuration changes. However, baseline and idle energy rates for cabinets were adjusted based on averages between FSTC and CEC databases and CEC and ENERGY STAR databases, respectively. These idle energy rate averages were integrated from Table 1 above into the revised workpaper.