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February 17, 2022

Ms. Tanja Crk
U.S. Environmental Protection Agency
Climate Protection Partnership Division
1200 Pennsylvania Avenue NW
Washington, DC 20460

Topic: ENERGY STAR® Version 5 Commercial Refrigerators and Freezers Final Draft Specification

Dear Ms. Crk:

This letter comprises the comments of the Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE) in response to the United States (U.S.) Environmental Protection Agency (EPA) ENERGY STAR® Version 5.0 Final Draft Specification on Commercial Refrigerators and Freezers (CRF).

The signatories of this letter, collectively referred to herein as the California Investor-Owned Utilities (CA IOUs), represent some of the largest utility companies in the Western U.S., serving over 32 million customers. As energy companies, we understand the potential of appliance efficiency standards to cut costs and reduce consumption while maintaining or increasing consumer utility of products. We have a responsibility to our customers to advocate for standards that accurately reflect the climate and conditions of our respective service areas, so as to maximize these positive effects.

We appreciate this opportunity to provide the following comments about this CRF Final Draft Specification. We commend EPA for revisiting vertical closed solid (VCS) product category and removing lowest application product temperature (LAPT) units. We also commend EPA for revising the chef base energy qualification thresholds to increase initial market adoption of this category and look forward to the addition of new categories like ice cream freezers and chef bases. We offer the following comments in support of EPA finalizing this specification.

- 1. The CA IOUs would like to thank EPA for refining their approach to the vertical closed solid self-contained freezers (VCS.SC.L) dataset, including removal of products tested according to LAPT.**

We support EPA's decision to eliminate models tested to the LAPT and ice cream freezers (VCS.SC.I) from the initial data set and consequently support their updated lower stringency. We believe that the decision to remove non-standard product testing conditions will maintain consumer trust in the ENERGY STAR brand by ensuring like-for-like comparisons of products.

2. The CA IOUs support the revisions to the energy qualification criteria for chef bases and look forward to assisting EPA with further revisions to the qualification threshold as this product market evolves.

We understand that EPA is operating on limited market data under this initial scope expansion for chef bases and support EPA's adjustments to modify the efficiency criteria given the new data provided to them. We agree with the decision to set the initial qualifying criteria to meet roughly 35 percent of the market and would be supportive of more stringent requirements in the future that will target the standard 25 percent of available products as this market matures.

Additionally, we recommend that the EPA monitor potential revisions to the ASHRAE¹ Standard 72 (2018): Method of Testing Open and Closed CRFs² as we are aware of recently formed efforts to improve the door-opening procedures as it relates to drawers and volumetric calculations. This will have a significant impact on how refrigerated and usable volume is reported for chef bases and will affect the normalized energy use. We also recommend that the EPA considers the differences between models with traditional chef base drawers (where the inserted pan becomes the holding container) and insulated chef base drawers where the product can be placed directly in the drawer (and can also hold pans).

3. In future revisions to this specification, the CA IOUs urge EPA to consider the addition of refrigerated preparation tables and ice cream freezers as categories.

We echo our previous written comments^{3,4} which provided suggestions for potential incorporation of refrigerated preparation tables into ENERGY STAR including tracking work to update ASTM⁵ F2143-18: Standard Test Method for Performance of Refrigerated Buffet and Preparation Tables⁶, as well as review the existing data in the California Energy Commission database on preparation tables. We believe EPA should consider categorizing preparation tables into several categories (refrigerated rail, air cooled top compartment, with or without a bottom compartment) focusing on self-contained, single compressor, bottom refrigerated compartment, and passively air-cooled top compartment category. We also recommend that the EPA consider normalizing preparation table energy based on a formula considering the number of standardized top compartment containers and bottom compartment volume.

In addition, we want to highlight ice cream freezers as a potential future product category. Ice cream freezers are currently included in the U.S. Department of Energy (DOE) scope of coverage for Commercial Refrigeration Equipment. Many ice cream freezer products are rated using the lowest applicable product temperatures as there are several units rated at -5°F and -10°F instead of the standard ice cream freezer temperature of -15°F, therefore we recommend that EPA evaluate all ice cream freezers based on the standard ice cream freezer temperature of -15°F. We also recommend that EPA evaluate all ice cream freezers based on refrigerated volume instead of total display area (TDA) regardless of the category.

¹ ASHRAE stands for American Society of Heating, Refrigeration, and Air Conditioning Engineers (www.ashrae.org/)

² <https://webstore.ansi.org/Standards/ASHRAE/ANSIASHRAEStandard722018>

³ https://www.energystar.gov/sites/default/files/CA%20IOUs%20Comments_5.pdf

⁴ https://www.energystar.gov/sites/default/files/CA%20IOUs%20Comments_8.pdf

⁵ ASTM stands for the American Society of Testing and Materials (www.astm.org)

⁶ <https://www.astm.org/f2143-16.html>

4. The CA IOUs would like to thank EPA for releasing low global warming potential (GWP) refrigerant data for ENERGY STAR qualified CRFs and other products.

The CA IOUs acknowledge and deeply appreciate EPA releasing low GWP for a variety of products, including CRFs. We understand that most of the self-contained refrigeration equipment is transitioning or has already transitioned to R-290 (Propane), which is suitable for relatively small compressor sizes and refrigerant charges under 150 grams (g). We also recommend that the EPA list refrigerant charge amounts and/or list multiple compressors along with the refrigerant type. This will allow the consumers to see that R-290 is not possible to be used as a low GWP alternative in single compressor units with charges over 150 g (or 300 g / 500 g pending rulemaking) due to flammability. In large volume refrigeration categories where R-290 cannot be used, consumers would be able to see what other low GWP alternatives are available in the market.

In conclusion, we would like to reiterate our support for EPA's Final Draft Specification for CRFs. We thank EPA for the opportunity to be involved in this process.

Sincerely,



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