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AHAM Comments on CEC's RFI for Establishing Data Collection Procedure Docket No 17-AAER-12

Please see the attached comments.

Additional submitted attachment is included below.

ASSOCIATION OF HOME APPLIANCE MANUFACTURERS

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November 18, 2024

By E-mail

Mr. David Hochschild
Chair
California Energy Commission
Docket Unit
Docket No. 17-AAER-12
715 P Street, MS-4
Sacramento, CA 95814
Docket@energy.ca.gov

Re: AHAM Comments on CEC's Request for Information for Establishing Data Collection Procedure; Docket No. 17-AAER-12

Dear Chair Hochschild:

The Association of Home Appliance Manufacturers (AHAM) respectfully submits the following comments to the California Energy Commission (CEC or Commission) on its Request for Information for Establishing Data Collection Procedure; Docket No. 17-AAER-12.

AHAM appreciates the opportunity to comment on the Request for Information and Feedback on Proposed Data Collection Procedure for Low-Power Mode Roadmap. We continue to urge the Commission not to include the vast majority of home appliances in the scope of its data collection and possible future low power mode regulations. Many home appliances are already covered by U.S. Department of Energy (DOE) energy conservation standards, which account for standby mode. And other appliances either are unplugged when not in use, spend very little or no time in low power mode, or use very little energy in low power mode. Nevertheless, in case CEC decides to include appliances in its scope, we comment below in detail in four key areas:

- Network mode should not be included in the definition of inactive mode;
- Incentivizing less inactive mode power could jeopardize safety;
- Product features that address nuisance tripping rely on inactive mode power; and
- There are several challenges with collecting inactive mode power data.

I. CEC Should Not Include Home Appliances In The Scope Of Its Data Collection Or Regulations Related To Low Power Mode.

This Request for Information is part of CEC's low power mode roadmap (LPM Roadmap) which is a method to promote energy savings in devices in their inactive condition, i.e., when not

performing their primary function for a user. CEC has stated that its plan is to initiate a process of iterative voluntary energy efficiency improvements and milestones with a regulation backstop if voluntary energy efficiency improvement and participation goals are not met. The roadmap begins with data collection and reporting and if CEC's targets are not met, CEC will refine its scope and pursue regulation.

AHAM supports CEC in its efforts to pursue energy efficiency improvements for California residents. We support energy conservation standards for home appliances that do not eliminate important product features or safety-related functions. In this case, however, it does not make sense for home appliances to be included in the scope of the LPM roadmap because:

1. Many home appliances are already subject to energy conservation standards, which include standby energy usage. Although most of these products are not in CEC's anticipated scope, many of the products in CEC's scope are in low power mode primarily for charging purposes and are, therefore, covered by DOE's battery charging systems and/or external power supply energy conservation standards.
2. For those products that are not covered by DOE already, many or most of them are typically left unplugged and, therefore, are not using energy when they are not performing their primary function for consumers.
3. The remaining home appliances do not use significant amounts of energy in low power mode and the burden of testing and reporting low power mode energy usage outweighs any small benefit associated with potential savings to the extent improvements to decrease energy use or improve efficiency are even technologically feasible.

A. Some Of The Products In CEC's Proposed Scope Are Already Covered By DOE Energy Conservation Standards.

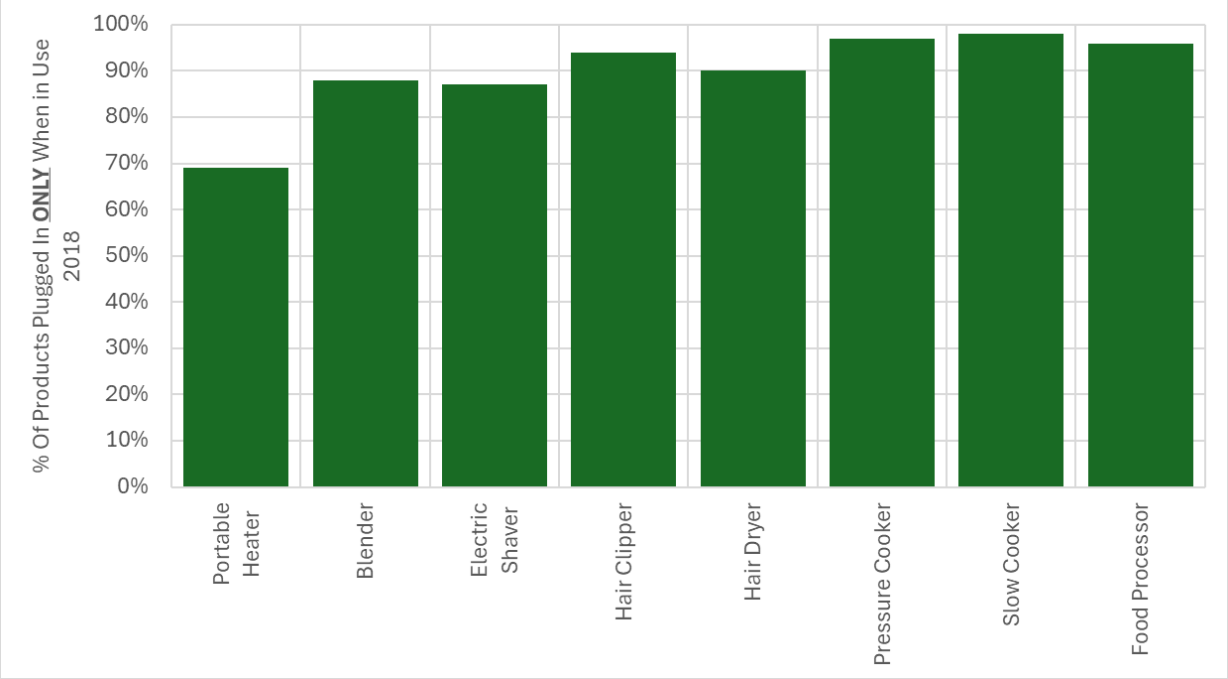
Some of the products listed in Appendix A can be standalone products, components within an appliance, or components that are external to the appliance but supplied with the appliance. A few examples of such products and relevant appliances are listed below. It should be noted that all these appliances have associated Department of Energy standards which include consideration of standby power.

Appendix A component/product	Appliance containing component/product
Programmable and connected thermostats and humidity controls	Room air conditioner Portable air conditioner
Power strips, outlets, and plugs providing power to another product	Battery chargers
Water pumps less than one horsepower, excluding dedicated pool and spa pumps	Dehumidifiers

It is AHAM's understanding that only standalone products are covered under this RFI. For example, a standalone water pump is in scope, but a water pump within a dehumidifier is not covered. Similarly, a standalone power outlet is in scope, but a power outlet provided with a hair clipper for the purposes of charging the battery is not covered. This understanding aligns the CECs stated goal to exclude already regulated products. AHAM requests that CEC confirm components listed in Appendix A that are within appliances or supplied with appliances are not within scope.

B. Many Portable And Floor Care Appliances Are Not Left Plugged In And Therefore, Do Not Consume Energy When Not Performing Their Primary Function.

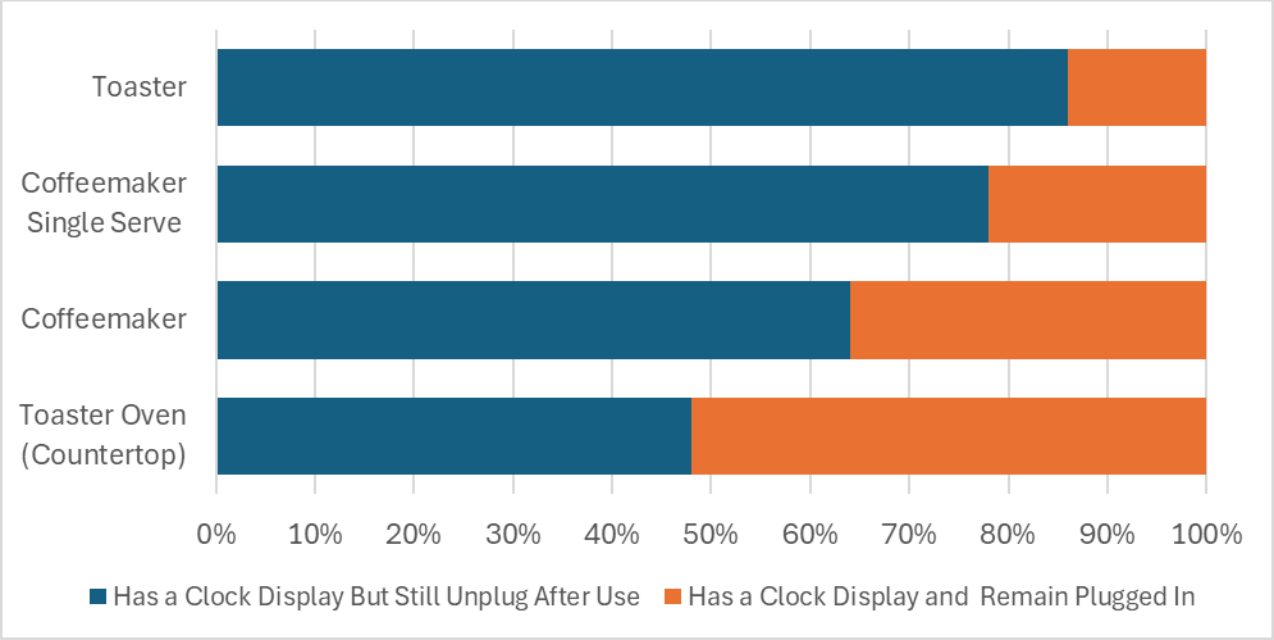
Many portable kitchen and personal care appliances such as blenders, slow cookers, pressure cookers, rice cookers, multicookers, air fryers, coffee grinders, electric grills, food processors, hair dryers, hair stylers, trimmers, and clippers are rarely left plugged in by consumers. Based on 2009, 2017, and 2018 AHAM Consumer Research, the graph below shows the percentage of consumers that only have their appliance plugged in when it is performing its primary function. As these and other similar appliances are not regularly left plugged in, they products do not consume inactive mode power.



According to this data, in most cases, over 90 percent of the time, products such as blenders, hair clippers, hair dryers, pressure cookers, slow cookers, and food processors are unplugged when not in use. Vacuum cleaners that do not run on batteries are also unplugged and stored after use. Products that are left unplugged when not in use by such a large percentage of consumers should not be included in the scope of this data collection as they will provide very little useful

information to the CEC or consumers and will fail to meet the CEC's goal of promoting energy savings in devices in their inactive condition.

In the case of coffeemakers (including single serve coffeemakers), toasters and toaster ovens, close to 50 percent of consumers indicated they unplug these appliances when not using them. Additionally in cases where these appliances do have a clock display, at least 48 percent of consumers indicated they still unplug them after use, as shown in the graph below.



C. Appliances That Are Left Plugged In Do Not Consume Significant Energy In Low Power Mode.

In addition, most portable and floorcare appliances that are left plugged in are plugged in to charge the battery and do not consume a significant amount of inactive mode power outside of battery charging functions that DOE already regulates. These appliances, including robotic vacuums, consume that charging power either through a battery charger or an external power supply. Both products are already regulated by the DOE and CEC.

For other products that do not have a battery charging function, many of them do not have features that require standby or low power mode. For example, according to AHAM's 2017 Consumer Research, almost 60 percent of portable fans were always plugged in, but less than ten percent had a clock or a timer feature meaning that those products are not likely using significant amounts energy in low power mode and may not even have such a mode. Should AHAM receive more detailed data on what secondary functions are offered and whether those functions require low power mode energy, we will provide it to the Commission.

In the case of products such as coffee makers, which are left plugged in by consumers more often, energy savings attributable to decreasing energy in low power mode are insignificant. For

example, the U.S. Environmental Protection Agency (EPA) conducted a study to determine whether and ENERGY STAR specification would advance energy savings for coffee makers. In its November 2011 Scoping Report, EPA determined that "certain consumers prefer automatic timer and clock display functionality, which would preclude a zero-watt standby. A well-designed timer may require 0.5 W for operation. Overall energy efficiency savings from standby power modifications range from 3-5 percent."[1] As such, EPA determined that no further action was required and has not further pursued an ENERGY STAR specification for coffee makers.

As outlined above, most of the home appliances listed in CEC's proposed Appendix A are not left plugged in and therefore consume no inactive mode power. In the few cases in which products, such as coffee makers, are left plugged in, the inactive mode power is insignificant. In both cases, the burden associated with measuring, providing, collecting, and communicating data on low power mode energy use for these products is not balanced by a benefit to consumers or the environment. CEC's analysis should include these points, possibly using DOE's analysis as a foundation.

II. Network Mode Should Not Be Included In The Definition Of Inactive Mode.

The definition of inactive mode should not include network mode, consistent with both federal and international standards.

Power consumption on network features is difficult to accurately measure due to variation in high-speed networks across consumer households and the implementation of connected features across appliances. In a 2022 final test procedure for cooktops, DOE determined that there was not enough data "to establish a representative test configuration for assessing the energy consumption of connected functionality for conventional cooking tops during an average period of use."[2] Similarly, there is a vast range of products on Appendix A that may consume power in network mode and the energy consumption across those products, and the various scenarios and settings in which they will be used in households, would be difficult to ascertain because of the differing uses and the developing nature of network features.

Furthermore, the design and operation of these features is evolving as the market, driven by consumer demand, continues to grow for these products. Such connectivity is clearly desirable from a consumer standpoint and setting overly strict inactive mode power limitations could impede these innovations and prevent these features, many of which have the opportunity to save energy. As such, AHAM urges CEC to remove network mode from its definition of inactive mode to align with other standard-setting bodies such as DOE and acknowledge the utility of connected products and complications associated with measuring power consumption in network mode.

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[1] ENERGY STAR Market & Industry Scoping Report: Coffee Makers; November 2011; Accessed at ENERGY STAR Scoping Report - Coffee Makers

[2] DOE Energy Conservation Program: Test Procedure for Cooking Products; Final Rule; Docket No. EERE-2021-BT-TP-0023-0024; RIN 1904-AF18; 87 FR 1492 (August 21, 2022). pg 51520.

III. Low Power Modes Often Have Safety Functions That Must Not Be Sacrificed.

Many devices listed in Appendix A, such as portable heaters, use low power modes to provide or participate in functions relating to safety and security sensing. These products are real time, continuously functioning devices whose intended use does not allow for cessation of network or safety features in inactive mode. Vital safety features include but are not limited to temperature sensors and electrical safety monitoring. For portable heaters in particular, safety is paramount to both industry and regulatory agencies such as the U.S. Consumer Product Safety Commission (CPSC). Recently proposed CPSC revisions to the UL 1278 safety standard include new requirements for components which may consume inactive mode power. These new safety requirements should be allowed to mature before imposing any new efficiency requirements which may promote usage of lower inactive mode power consumption components that may not permit these improvements.

IV. Product Features That Address Nuisance Tripping Rely On Inactive Mode Power.

More efficient home appliances, including appliances listed in Appendix A, use components which operate at high frequencies and thus contribute to AFCI and GFCI nuisance tripping where power is removed from the appliance. UL has conducted an independent study that verifies this.[3]

Furthermore, CPSC staff has connected nuisance tripping to DOE energy conservation standards in its letter: "Expanding Department of Energy requirements for higher energy efficiency of products have resulted in broader use of energy-saving technologies."[4] CPSC goes on to provide examples of high frequency technology that can contribute to nuisance tripping which may be used in other products DOE does not regulate, but that do appear in CEC's proposed Appendix A.

There are a limited number of things that appliance manufacturers can do to help mitigate nuisance tripping, such as adding filters. But filters can draw a significant percentage of inactive mode power. Although manufacturers may be able to turn to filters that use less inactive mode power, those filters may not be able to adequately prevent nuisance tripping.
Manufacturers already need to delicately balance efficiency requirements and consumer expectations. Incentivizing less inactive mode power when the available tools to meet both of those demands rely on that inactive mode power will hinder the industry's progress in addressing nuisance tripping and meeting energy efficiency goals.

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[3] *See* Study of High-Frequency Spectrum for 120 V Household Appliances, April 5, 2023, available at https://collateral-library-production.s3.amazonaws.com/uploads/asset_file/attachment/54854/Study_of_High_Frequency_Spectrum_for_120_V_Household_Appliances.pdf

[4] Letter from Douglas Lee, Electrical Program Area Risk Manager, Office of Hazard Identification and Reduction, CPSC to Marina Currie, Project Manager for STP 101, UL Standards & Engagement (Feb. 7, 2023).

V. There Are Several Challenges In Collecting Inactive Mode Power Data.

A. The Utility Of Features In Inactive Mode May Be Affected.

Secondary functions of appliances that are featured in inactive mode, such as a timer or clock, are important to the consumer experience and in some cases, necessary to maintaining the product's proper functionality. In setting its own efficiency standards, DOE has considered the utility of features in inactive mode. In its proposed energy conservation standards for residential conventional cooking products, for example, DOE screened out (meaning DOE eliminated from consideration as a technology option to improve efficiency) a subset of low-standby-loss electronic controls that use "automatic power-down" because they may result in the loss in the utility of the continuous clock display.[5] Incentivizing less inactive mode power will likely have the effect of removing several features that are currently available and valued by consumers, or in some cases, especially as it relates to safety, necessary. Because it is not feasible to decrease low power mode for many home appliances without sacrificing consumer functionality, CEC should eliminate them from the scope of the LPM Roadmap.

B. Many Appliance Manufacturers Do Not Have Necessary Equipment To Test Inactive Mode Power.

It is AHAM's understanding that several members, especially those who manufacture portable appliances such as hair dryers and hair trimmers, do not have the equipment to test for inactive mode power. When considering the additional equipment specific to CEC's Data Collection Procedure, most manufacturers will not have the necessary equipment to conduct the full testing and as a result, report the results of that testing. Obtaining that equipment or paying third party laboratories to conduct the testing on a full range of products will come with significant costs for manufacturers.

Lastly, if CEC decides to continue forward with collecting inactive condition data for portable and floorcare appliances despite AHAM's strong objections, we recommend that CEC reduce or eliminate the test burden on manufacturers in order to achieve higher participation. Home appliance manufacturers are familiar with the IEC 62301:2011 standard. Manufacturers will be more likely to report data if they can use a test method that is already familiar and does not expand upon or change the existing standard. Another way to reduce burden is to allow reporting of component level power consumption as tested outside of the end-use product. This will allow end-use product manufacturers to use component specifications rather than conduct testing.

VI. AHAM Suggests A Number Of Editorial Fixes In The Draft Data Collection Procedure.

[5] Energy Conservation Standards for Residential Conventional Cooking Products; Docket Non EERE-2014-BT_STD-0005; RIN 1904-AD15; 88 Fed. Reg., 6818 (Feb. 1, 2023).

AHAM would like to note that 7.3 incorrectly references Figure 6. We believe that Figure 5 is the correct reference for that section of the Data Collection Procedure. Similarly, section 7.5 should refer to Figure 6. It currently references Figure 7, which we believe to be an error.

Secondly, based on its current form, it is unclear whether to defer to the manufacturer's instructions or the default settings when preparing an appliance for testing to the Data Collection Procedure. For example, the instructions state to "perform the setup in the order given in the manufacturer's instructions" but later in 3.6, the technician is advised to "use the default option for settings that potentially impact power." AHAM recommends that the Data Collection Procedure be updated to reflect just one setting.

AHAM appreciates the opportunity to submit these comments on CEC's Request for Information for Establishing Data Collection Procedure and would be glad to discuss these matters in more detail should you so request.

Respectfully Submitted,

Meredith Birkhead
Regulatory Affairs Manager

About AHAM: AHAM represents more than 150 member companies that manufacture 90% of the major, portable and floor care appliances shipped for sale in the U.S. Home appliances are the heart of the home, and AHAM members provide safe, innovative, sustainable and efficient products that enhance consumers' lives. The home appliance industry is a significant segment of the economy, measured by the contributions of home appliance manufacturers, wholesalers, and retailers to the U.S. economy. In all, the industry drives nearly $200 billion in economic output throughout the U.S. and manufactures products with a factory shipment value of more than $50 billion.