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| **Docket Number:** | 17-AAER-12 |
| **Project Title:** | Low-Power Mode |
| **TN #:** | 259429 |
| **Document Title:** | Request for Information for Establishing Data Collection Procedure |
| **Description:** | The California Energy Commission (CEC) seeks comments and feedback from interested members of the public on CEC's intent to establish a Data Collection Procedure (DCP) for the Low-Power Mode (LPM) Roadmap based on the Data Collection Procedure for Inactive Condition Power, Version 3 |
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CEC-057 (Revised 1/21)

# Request For Information (RFI) and Feedback on Proposed Data Collection Procedure for Low-Power Mode Roadmap

# Docket: 17-AAER-12

# Written Comments Due: November 18, 2024

The California Energy Commission (CEC) seeks comments and feedback from interested members of the public on CEC's intent to establish a Data Collection Procedure (DCP) for the Low-Power Mode (LPM) Roadmap based on the Data Collection Procedure for Inactive Condition Power, Version 3[1] submitted by the California investor-owned utilities' Code and Standards Enhancement (CASE) Team. The DCP will standardize the collection of the power consumption data for consumer electronics and appliances in their inactive condition and serve as the foundation for the initial data collection for the LPM Roadmap. The CEC is proposing to align this data collection with the DCP Reporting Tool V3[2] submitted by the CASE Team.

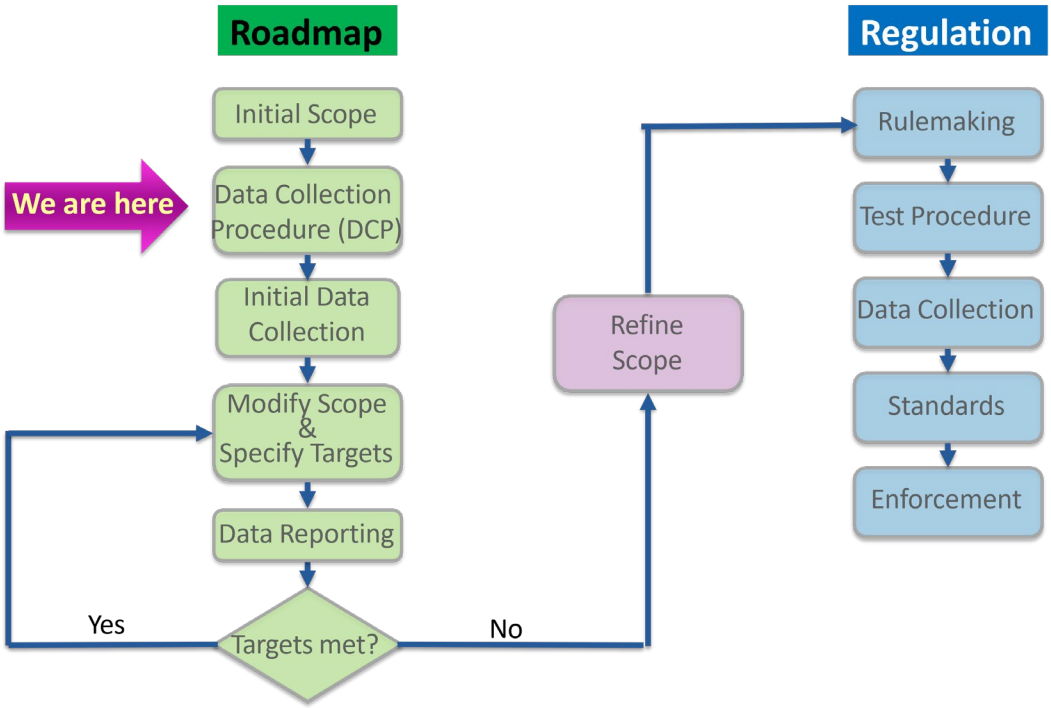
## Background

The LPM Roadmap is a method to promote energy savings in devices in their inactive condition, i.e., when not performing their primary function for a user. The LPM Roadmap proposes a new process of iterative voluntary energy efficiency improvement specifications and other milestones, developed by the CEC to address the complex and broad topic of passive energy use during off, standby, and similar inactive modes in a variety of devices.

The LPM Roadmap also proposes a regulation backstop if voluntary energy efficiency improvement and participation goals are not met (Figure 1). The next steps of the LPM Roadmap are the finalization of the DCP and the initiation of the initial data collection. This voluntary, broad-scope data collection approach enables the CEC to collect and analyze DCP inactive condition power measurement data and to further improve collaboration with industry and other interested stakeholders.

[1] California Investor-owned Utilities. 2023. Comments to Docket 17-AAER-12, TN248671, Feb. 3, 2023; available at https://efiling.energy.ca.gov/GetDocument.aspx?tn=248671&DocumentContentId=83170
[2] California Investor-owned Utilities. 2023. Comments to Docket 17-AAER-12, TN248675, Feb. 6, 2023; available at https://efiling.energy.ca.gov/GetDocument.aspx?tn=248675&DocumentContentId=83183

Figure 1: The LPM Roadmap




The LPM Roadmap was started in 2017 with the first workshop held in July 2017 and the initial framework of DCP proposed in 2018. The DCP has gone through three iterations, including extensive round robin testing, and the CEC believes the current version is sufficiently robust for initial data collection to provide a meaningful characterization of energy use behavior.

The CEC is therefore seeking comments and feedback on the above determination. The following are guiding questions for participant feedback, noting that the CEC also encourages feedback on aspects not captured within the guiding questions.

**Guiding Questions**

**Scope**

The DCP is designed to accommodate a wide range of product types and models to standardize and streamline the data intake and analysis. The CEC has established its initial scope by excluding any product that is subject to federal (U.S. Department of Energy) or state (CEC Title 20) regulations that include limits on standby or inactive mode power. All other products are potentially within the LPM Roadmap scope. Examples of in-scope product categories are provided in Appendix A at the end of this document.

1. What is your feedback regarding the scope of the DCP?
2. Are there any in-scope product categories listed in Appendix A that may not be effectively tested using the CASE Team's proposed DCP V3?
3. Are there any products not listed in Appendix A that should be included in the scope of the DCP?

4. Is there anything else CEC should consider with regards to the scope of the DCP?

**Data Collection Procedure (DCP)**
The proposed DCP builds on the International Electrotechnical Commission (IEC) test procedure, IEC 62301:2011, which provides limited guidance for making power measurements in low-power operating modes. IEC 62301 lacks setup instructions that apply to many of the newest functions that today's electricity-using products may offer, such as network connectivity, voice activation, and environmental monitoring. In addition, IEC 62301 is designed to measure power in discrete operational modes rather than in a general inactive condition that may consist of multiple modes. The CASE Team's proposed DCP V3 provides instructions for setting up and carrying out DCP inactive condition power measurements, addressing these two limitations of IEC 62301.

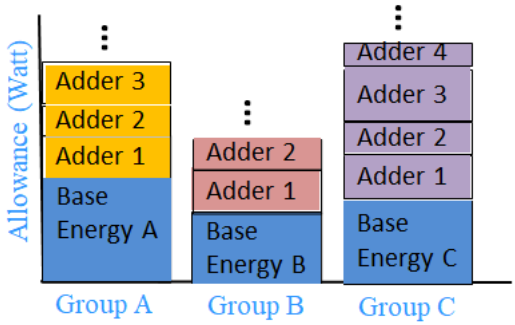
5. What is your feedback on the method of establishing DCP?
6. Do you think the proposed DCP is appropriate for the initial data collection for the LPM Roadmap? If not, why so?
7. Is there anything else CEC should consider with regard to the DCP?

**Data Collection**
The CEC plans to leverage the Modernized Appliance Efficiency Database System (MAEDbS) platform for the initial data collection under the LPM Roadmap. MAEDbS is a well-established and easy-to-use platform for submitting appliance efficiency data to the CEC, and one that many manufacturers are already familiar with. The information collected will align with the data fields in the DCP Reporting Tool V3 submitted by the CASE Team. MAEDbS data intake is compatible with spreadsheet submittals, which enables efficient data intake.

8. What is your feedback on CEC's intent to utilize the MAEDbS platform for the initial data collection?
9. Is there any information that should be collected that is not in the DCP Reporting Tool V3? If so, please explain why.
10. Is there any information in the DCP Reporting Tool V3 that should not be collected? If so, please explain why.
11. Is there anything else CEC should consider with regards to using MAEDbS for DCP data collection?

**Device Categorization**
The CEC is planning to use a clustered horizontal approach to device categorization, meaning that products with similar baseline idle power consumption are grouped and made eligible for allowances related to specific secondary functions such as displays, sensors, and network connectivity. Power consumption criteria would be a combination of baseline and power adders. The criteria would vary by cluster. Figure 2 helps to illustrate this approach:

Figure 2: Clustered Horizontal Framework




12. What is your feedback on this method of grouping and categorization, especially regarding what information is collected during the initial data collection?

**Data Transparency**

The power consumption data collected by the DCP will be publicly available to ensure transparency and efficient data sharing, as well as compliance with California's Public Records Act.

13. Please share your feedback or concerns with this approach to data handling.

**Industry Participation**

Active participation by industry is critical to achieving the goals of the LPM Roadmap and avoiding the need for mandatory regulations. The CEC would therefore like to engage with industry representatives and achieve high participation in data reporting.

14. Please provide your recommendations for the CEC to achieve high participation in data reporting.
15. Please share any known or possible barriers to high participation in data reporting, including details on the cost of compliance with the voluntary data reporting.

**Public Comment**

Written comments, feedback, and other technical material must be submitted to Docket 17-AAER-12 (linked below) by **November 18, 2024**. Written comments, attachments, and associated contact information (for example, address, telephone number, email address) will become part of the public record, with access available via any internet search engine.

The CEC encourages the use of its electronic commenting system. Visit the e-commenting page at https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=17-AAER-12 which links to the comment page for this docket. Enter your contact information and a comment title describing the subject of your comment(s). Comments may be included in the "Comment Text" box or attached as a downloadable, searchable document

consistent with the California Code of Regulations, Title 20, section 1208.1. The maximum file size allowed is 10 MB.

Written comments may also be submitted by email. Include docket number 17-AAER-12 in the subject line and email to docket@energy.ca.gov.

A paper copy may be sent to:

California Energy Commission
Docket Unit
Docket No. 17-AAER-12
715 P Street, MS-4
Sacramento, CA 95814

This document and all documents relied upon for establishing the Data Collection Procedure are publicly available from the CEC's docket log at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=17-AAER-12.

To stay informed about this proceeding and receive documents and notices of upcoming workshops and hearings as they are filed, please subscribe to the proceeding email subscription https://www.energy.ca.gov/proceeding/low-power-mode. The email subscription sends out email notifications and direct links when documents and notices are filed in the proceeding docket. If you are unable to access the RFI or applicable docket or if you have any questions on the subject matter of this RFI, please contact Ho Hwang at ho.hwang@energy.ca.gov. The CEC's Appliance Efficiency Branch can also be contacted by phone at (916) 651-7100.

The CEC's Public Advisor provides the public assistance in participating in CEC proceedings. To request assistance, interpreting services, or reasonable modifications and accommodations email publicadvisor@energy.ca.gov or call (916) 957-7910 as soon as possible but at least five days in advance. The CEC will work diligently to meet all requests based on availability.

Direct media inquiries to the Media and Public Communications Office at (916) 654-4989, or by email at mediaoffice@energy.ca.gov.

## Appendix A: Examples of in-scope product categories

| End Use | General product category | Examples of in-scope Product categories | Typical Primary Function |
|---|---|---|---|
| Heating, Ventilation, and Air Conditioning (HVAC) | Space Conditioning | Portable heaters | Maintaining indoor comfort |
| HVAC | Ventilation | Residential standalone fans | Providing fresh air and air circulation |
| HVAC | Controls | Programmable and connected thermostats and humidity controls | Allowing occupant management of indoor temperature, humidity, and ventilation |
| Lighting | Controls | Light switches | Allowing manual control of lighting |
| Lighting | Controls | Wireless adapters | Transmitting lighting commands, luminaire information, and sensor data |
| Lighting | Controls | Occupancy sensors | Gathering occupancy data for lighting controls |
| Lighting | Controls | Environmental & light level sensors | Gathering environmental conditions data for lighting controls |
| Electronics | Multimedia | Game consoles | Playing video games or streaming video or audio content |
| Electronics | Multimedia | Speakers (including smart speakers) | Playing audio or video content |
| Electronics | Multimedia | Streaming media players | Playing audio or video content |
| Electronics | Multimedia | Receivers | Transmitting audio signals from media players and radio to speakers |
| Electronics | Multimedia | Turntables | Reading audio signal from records |
| Electronics | Multimedia | Home-theater-in-a-box systems | Playing audio or video content |
| Electronics | Multimedia | Soundbars | Playing audio or video content |
| Electronics | Multimedia | Audio amplifiers | Transforming audio signals to power levels required for speaker input |
| Electronics | Multimedia | Video projectors | Transforming video input to light projection and/or playing audio content |
| Electronics | Computer accessories & peripherals | Computer speakers | Playing audio content |
| Electronics | Computer accessories & peripherals | External hard drives | Reading or writing data |
| Electronics | Computer accessories & peripherals | Docking stations | Providing power and signals to a computer |
| Electronics | Imaging equipment | Printers | Printing an image or document |
| Electronics | Imaging equipment | Multi-function devices | Copying, scanning, printing, or faxing an image or document |

| Electronics | Network equipment | LAN equipment | Passing user-generated IP traffic |
|---|---|---|---|
| Household devices | Small kitchen appliances | Coffee makers | Making or heating coffee or water |
| Household devices | Small kitchen appliances | Coffee grinders | Reducing coffee beans or other food to smaller size |
| Household device | Small kitchen appliances | Blenders | Stirring or pureeing foods and beverages |
| Household device | Small kitchen appliances | Electric grills | Cooking or warming food |
| Household device | Small kitchen appliances | Toaster ovens and toasters | Cooking or warming food |
| Household device | Small kitchen appliances | Air fryers | Cooking or warming food |
| Household device | Small kitchen appliances | Pressure cookers, rice cookers, slow cookers, and multicookers | Cooking or warming food |
| Household device | Small kitchen appliances | Food processors | Chopping or pureeing foods and beverages |
| Household device | Electric housewares | Vacuum cleaners | Cleaning surfaces and upholstery |
| Household device | Electric housewares | Sewing machines | Connecting fabric and other materials by stitched thread |
| Infrastructure | Power | Power strips, outlets, plugs | Providing power to another product |
| Infrastructure | Power | Smoke & carbon monoxide detectors | Detecting fires, life safety, and indoor air quality issues |
| Infrastructure | Power | Energy monitoring systems | Recording and alerting for device energy consumption |
| Miscellaneous | Business equipment | Shredders | Destroying paper documents |
| Miscellaneous | Business equipment | Pencil sharpeners | Sharpening pencils |
| Miscellaneous | Personal care | Hair stylers, trimmers, clippers | Cutting or styling hair |
| Miscellaneous | Personal care | Hair dryers | Drying hair |
| Miscellaneous | Personal care | Epilators | Removing hair |
| Miscellaneous | Outdoor equipment | Outdoor water features | Moving water for human aesthetic appreciation |
| Miscellaneous | Outdoor equipment | Irrigation controllers | Moving water for use by plants |
| Miscellaneous | Bathroom devices | Heated towel racks | Drying and warming towels |
| Miscellaneous | Hobby, entertainment, leisure | Exercise equipment | Allowing fitness activity |
| Miscellaneous | Hobby, entertainment, leisure | Water pumps less than one horsepower, excluding dedicated pool and spa pumps | Moving or pressurizing water |

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|---|---|---|---|
| Miscellaneous | Hobby, entertainment, leisure | Heated or motorized furniture | Supporting activities such as seating, eating, storage, or sleeping |
| Miscellaneous | Hobby, entertainment, leisure | Musical instruments and production equipment | Creating and transforming sound and audio signals |

Note, the table above is similar to the table presented in Appendix A of the CASE Team's proposed DCP V3 with the difference that the above table does not include air purifier, MP3 speaker docks, faucets, showerheads, and toilets.