DOCKETED	
Docket Number:	17-AAER-12
Project Title:	Low-Power Mode
TN #:	240046
Document Title:	AGGIOS Inc Comments in response to LPM DCP proposal
Description:	N/A
Filer:	System
Organization:	AGGIOS, Inc.
Submitter Role:	Public
Submission Date:	10/12/2021 9:45:19 AM
Docketed Date:	10/12/2021

Comment Received From: AGGIOS, Inc. Submitted On: 10/12/2021 Docket Number: 17-AAER-12

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Additional submitted attachment is included below.



Commissioner Andrew McAllister California Energy Commission 1516 Ninth Street Sacramento, CA 95814-5512 AGGIOS, Inc. 5251 California Ave. Suite 120 Irvine, CA 92617

Phone: (949) 212 0130 Email: vojin.zivojnovic@aggios.com

Irvine, 10/10/2021

Subject: Data Collection Procedure (DCP) for the California Energy Commission's (CEC) Low Power Mode (LPM) Roadmap proposed by IoUs (17-AAER-12)

Dear Commissioner McAllister,

Thank you for the opportunity to comment on the proposed Data Collection Procedure (DCP) for the California Energy Commission's (CEC) Low Power Mode (LPM) Roadmap.

AGGIOS is the leading independent supplier of power management software and tools to the aerospace and defense industry. The innovative power management solutions developed by AGGIOS are guaranteeing highest power and thermal efficiency of 100s of millions of electronic devices deployed world-wide.

Since 2012 AGGIOS is actively participating in energy efficiency efforts led by the CEC and DoE. AGGIOS has partnered with other key partners from the electronics industry to support the CEC, California Investor-Owned Utilities (IoUs) and energy advocacy organizations to analyze power consumption of computers and develop prototypes in support of the proceedings of the California Appliance Efficiency Regulation for Computers (California Code of Regulations, Title 20, sections 1601-1609). This type of industry teamwork in support of CEC's efforts has received highest praise from all involved parties, including leading industry alliances.

We strongly support the CEC LPM roadmap process based on a cross-product, horizontal approach. In 2013 AGGIOS has answered CEC's Invitation to Submit Proposals (Docket # 12-AAER-2) with a docketed proposal for a "Unified Energy Efficiency Standard for Computing Appliances" that has set the stage for the unified horizontal approach to device LPM that CEC is now suggesting. In 2018 AGGIOS has docketed comments on the LPM Test Procedure Discussion Document and in August 2021 provided verbal

comments during the webinar on the LPM DCP Roadmap. After the webinar, AGGIOS engaged in a constructive technical dialog with the IoUs and their partners.

Notwithstanding our strong support for the unified horizontal approach to LPM that the CEC has envisioned, we are here expressing concerns about IoU's decision not to involve any of its proven industry and research partners in the preparation of the DCP for the LPM roadmap and other related activities.

Our major concern is that IoU's LPM DCP proposal has been defined in an <u>ad-hoc manner</u> by replicating the EnergyStar testing procedure for computers and applying to a wide variety of modern autonomously operating devices with very different functionality than user-operated computers, thereby disregarding the well-established key principles of device testing. It is well known that every test or data collection procedure has to be qualified by the "4 Rs": Representative/Relevant, Repeatable, Reproducible and Reasonable. Only procedures that fulfil the "4 Rs" with a marginal error can lead to meaningful results. Our own preliminary evaluation has shown that the proposed Data Collection Procedure is not passing the "4 Rs" test.

IoU's CASE team has stated that the proposed DCP has been "Vetted on 44 products at PG&E lab, iteratively revised" in PG&E's Applied Technology Services (ATS) lab in San Ramon, CA (slide 17 of CASE team proposal). The set of 44 products represents a sizable sample of UUTs that should be sufficient to initially qualify the proposed LPM DCP in terms of the "4 Rs". As the first step, we are urging the CASE team to disclose detailed quantitative results of their own "4 Rs" analysis.

If IoU's LPM DCP proposal does not qualify, the industry, its alliances and other stakeholders should be allowed to define their own cross-product, horizontal LPM DCP proposal that can successfully pass the "4 Rs" test and demonstrate results to the CEC and all other involved parties for further consideration.

Sincerely,

Vojin Zivojnovic, Ph.D. CEO AGGIOS, Inc. Irvine, CA