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February 26, 2015

Dr. Andrew McAllister
California Energy Commission
1516 Ninth Street, MS-31
Sacramento, California 95814

Dear Commissioner McAllister:

I am writing to urge the California Energy Commission to provide multi-year Electric Program Investment Charge (EPIC) funds to support ongoing energy efficiency research at the California Plug Load Research Center (CalPlug) at the University of California, Irvine (UCI). The commission established CalPlug in 2011 with Public Interest Energy Research (PIER) funds, but has provided no additional financial support since PIER transitioned to EPIC in 2013.

CalPlug is unique within the state of California. It was created to improve energy efficiency in the use and design of plug load devices, consistent with the goals of the Long Term Energy Efficiency Plan adopted by the California Public Utilities Commission (CPUC). Currently, plug load devices account for as much as 20 percent of the electrical consumption in buildings, and that figure is expected to grow to more than 30 percent by 2030. To make matters worse, most of these devices consume power even when not in use, earning them the dubious label "vampire devices." Worldwide, such devices consume 15 gigawatts of electricity, 24/7. If not better managed, they will most certainly undermine California's plans for Zero Net Energy in new homes by 2020. CalPlug was created expressly to help the state respond to this challenge.

The center is housed at the California Institute for Telecommunications and Information Technology (Calit2) at UCI and operates under the leadership of Dr. G.P. Li, professor of electrical engineering and computer science, and director of Calit2. It encompasses more than 8,000 square feet of space, including an engineering lab, test and demonstration rooms, offices, and space for meetings. Calit2 administers CalPlug and provides access to an auditorium, electronics labs, an incubator for start-up firms, and visualization and teleconference facilities.

CalPlug has generated support from more than 30 stakeholders, including Southern California Edison, trade organizations such as the Consumer Electronics Association, and companies like DIRECTV. This collaborative approach fosters innovation, informs the development of sound public policy, and, ultimately, transforms the marketplace.

Over the past three and a half years, CalPlug has:

- Produced a prototype device demonstrating potential energy savings of nearly 60 percent for more than 200 million set-top boxes across the United States;
- Hosted and organized a series of day-long stakeholder meetings (twice a year) and topical workshops on energy efficiency plug load solutions, engaging more than 1,000 participants representing manufacturers, utilities, service providers, policymakers, research institutes, and non-profit organizations;
- Performed one of the most thorough studies conducted to date of individual user behavior relative to computer power-management features at home and at work (CalPlug researchers surveyed more than 2,000 individuals, collected demographic information, and monitored the work computers of more than 100 participants for more than a month.);
- Produced five patents and is in the process of commercializing one of the technologies developed to promote energy-efficient consumer electronics; and
- Trained more than 150 undergraduate, graduate, and postdoctoral students for energy-efficiency positions.

Furthermore, CalPlug is leading the definition, validation, and roadmap to market in the Tier 2 Advanced Power Strip category with more than 350 kWh savings per household.

The CPUC's Energy Efficiency Strategic Plan – which created a framework to make energy efficiency a way of life in California – calls for extensive research and development efforts and partnership programs to advance the market for the most energy-efficient plug load devices. Despite the importance placed on the impact of plug load devices on the state's energy use, research in this arena garnered little support during the last EPIC funding cycle. This is particularly surprising given the emphasis placed on what the CPUC has characterized as a "complex, rapidly growing driver of electricity consumption."

For all the reasons stated, I ask you to consider multi-year, programmatic support for CalPlug as you evaluate the 2015-2017 Investment Plan. The center is a proven asset, established by the commission for the benefit of the citizens of California. It most certainly meets EPIC requirements to maximize benefits to the investor-owned utility electricity ratepayers by promoting greater reliability, lowering costs, and increasing safety.

Sincerely,

Howard Gillman
Chancellor

cc: Dr. G.P. Li, Director, Calit2
Dr. Robert Weisenmiller, Commission Chair
Commissioner Karen Douglas
Commissioner David Hochschild
Commissioner Janea A. Scott