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California Energy Commission  
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Re: EPIC Implementation Workshop; Programmatic Funding of Key Centers

Dear Mr: Harland:

I am writing you in strong support of programmatic funding for the California Lighting Technology Center (CLTC), a public-private partnership that, since its inception, has become progressively more important to quality, efficient lighting throughout the buildings markets. CLTC partnerships grew out of close collaborative relationships between the lighting industry, building industry, electric utilities, and the California Energy Commission. All have contributed both intellectually and financially in support of RDD&D efforts at the CLTC, past, current-ongoing, and future. Broad-based programmatic funding is essential to support the comprehensive charter of the CLTC, consisting of focused and programmatic research, development, demonstration and deployment (RDD&D), as well as supporting the training and development of student-training and student-internship programs.

It is of fundamental importance that EPIC (Electric Program Investment Charge) funding be committed not only to a spectrum of focused, competitive research programs, but also to proven, ongoing research centers. Successful research centers supported by non-specific, stable, programmatic-funding are critical to California's energy-efficiency future because of their unique ability to find, explore and evaluate techniques and technologies that are not necessarily in existing and/or planned research program solicitations ("focused research" in this context).

I have been involved with the CLTC since its inception, providing advice and assistance to the CLTC in the residential sector, and receiving the benefits of a very wide and deep lighting center. Based on my experience, I provide here three examples of the critical role that the CLTC has made to energy-efficiency (and the quality of life) in California due to its broad programmatic charter, funding, and resulting activities.

1. Development of initial "reach" standards for CFL, and more recently, LED lamps, that have become industry standards for excellent lighting quality. The CLTC was an early developer and promoter of methods to evaluate and quantify lighting quality that would push the manufacturers to improve their products to meet quality-lighting standards. These metrics ultimately became standards for the industry as well as for consumers to use in choosing lighting products. In fact, the current ubiquitous labeling of lamps with their measured color temperature and CRI is in no small part due to the early work and continued efforts of the CLTC to improve lighting in buildings, both residential and commercial.

2. LED lighting in buildings: the CLTC has performed leading R&D that has led to their own development and demonstration of a wide variety of lamp–fixture designs, functional-lighting design specifications, and research leading to market uptake and implementation of quality-lighting fixtures and lamps.
3. Bi-level illumination in hallways, walkways, garages and large parking structures: a single, clear example of the CLTC taking a concept internal to their center, researching and developing prototypes, demonstrating prototypes in the field, proving function and savings, all resulting in market adoption, due to the wide-band, long-term thinking and actions of CLTC.

These are but three examples of many advances in lighting technologies, and lighting-related research performed by the CLTC. They also exemplify key benefits of programmatic funding spent to maintain a proven, highly effective research center. California, and specifically the EPIC program must continue funding for both competitive-solicitations for focused research-programs, and institutional or broad “programmatic” funding of proven effective research centers, specifically the CLTC. California needs both. Focused research programs by themselves are limited to a focused area, and as such, they can, and should miss opportunities not directly part of their programs; whereas a center like the CLTC, with proper funding will continue to discover things outside the main research foci, and they are designed to have the latitude to follow such ideas to at least determine their potential. Further, a focused research program can never go the distance from R&D to Demonstration, to Deployment, and finally to market adoption, as the CLTC has demonstrably done in several areas.

Another key activity and benefit of the CLTC is its integrated and harmonized activities that bring together education, research, and codes and standards activities. I strongly support and encourage this integrated approach.

The CLTC and a few other notable research centers that use a similar model present opportunities to effectively integrate all types of RDD&D activities to address long-term energy efficiency issues that cannot be addressed, resolved, implemented, or obtained through individual project and/or research-program solicitations in different activity areas and at different times. I urge the Commission to support the CLTC through the EPIC program with a budget commensurate with its proven success and importance to California’s past, current and future energy and lighting needs.

Fiat Lux.



Rob Hammon, Ph.D.  
President

Cc: Commissioner McAllister  
Commissioner Hochschild  
Rob Oglesby