

## DOCKETED

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*Comment Received From: Andrew Campbell*

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**The Value of Research Centers and Pathways to Support Them**

*Additional submitted attachment is included below.*



February 10, 2017

RE: Docket # 17-EPIC-01, Development of the California Energy Commission Electric Program Investment Charge 2018 – 2020 Triennial Investment Plan

Dear Commissioners:

The Energy Institute at Haas at UC Berkeley (Energy Institute) offers the following comments to the California Energy Commission (CEC) regarding the benefits of University of California (UC) and national lab-based research centers in the state. The Energy Institute also offers ideas on how the CEC can proceed to engage research centers through the EPIC program.

### **The Value of Research Centers**

In the *2015-2017 Triennial Investment Plan* the CEC describes benefits of working with research centers at UC and National Laboratories. The plan discusses how research centers can be a cost-beneficial way to support projects and identifies several unique benefits of working with centers.<sup>1</sup>

The Energy Institute would like to highlight four ways centers can support the EPIC program’s goals.

#### **1. Sustain multi-year themes**

Research centers can pursue multiple projects within a related theme. For example, the Center for the Study of Energy Markets (CSEM), which was previously funded by the CEC, pursued research projects within several targeted areas. One area was electricity rate design. CSEM produced papers that examined customer responses to tiered and dynamic rates, distributional impacts and implications of rates on the environmental policies. Since these projects were all overseen by the same research center they reinforced and complemented one another, avoiding duplication. This approach reinforces the Legislature’s directive to fund a portfolio of “strategically focused” projects.<sup>2</sup>

#### **2. Attract top researchers and students to work on California’s challenges**

California is home to internationally-recognized research institutions. The UC system includes six of the nation’s top 10 public universities.<sup>3</sup> Since the state’s research institutions are global in scope, researchers have opportunities to focus on national and international topics. A funding commitment to research centers from the CEC will attract researchers and students to address energy and environmental topics of specific importance to California. California should have leading research centers that match the state’s leadership on energy and environmental policy and technology.

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<sup>1</sup> California Energy Commission. 2014. *The Electric Program Investment Charge: Proposed 2015 2017 Triennial Investment Plan*. California Energy Commission. Publication Number: CEC-500-2014-038-CMF, pp. 207-209.

<sup>2</sup> Public Resources Code §25711.5. Enacted by Senate Bill 96 (Committee on Budget and Fiscal Review, Chapter 256, Statutes of 2013).

<sup>3</sup> <https://www.universityofcalifornia.edu/news/6-uc-campuses-named-among-nation-s-top-10-public-universities>

### 3. Educate the state's future workforce

University-based research centers employ undergraduate and graduate students in their research projects. Students learn from their work experience and also from their interactions with faculty and staff. This means that in addition to developing new intellectual capital, CEC funding can produce human capital. Centers can, thus, make a significant contribution to the training of the next generation of California's energy experts. Providing opportunities for students is more difficult through one-off research projects because the timeline and needs of a single research project are hard to align with the academic year and funding needs of students. A portfolio of projects managed by a center can attract more student involvement.

### 4. Reduce the administrative burden on the CEC so CEC staff can focus their expertise on substance instead of process

Solicitation development, proposal development, proposal review and contracting are time- and effort-intensive for the CEC and potential recipients. By funding centers that in turn pursue multiple projects, the CEC can avoid these repetitive processes. This would allow CEC staff to focus their technical and research expertise on substantive areas in furtherance of EPIC goals. The net administrative burden can be lowered since a UC-based center can organize projects within the UC system much more easily than the CEC can enter into separate agreements for each UC project.

## **Pathways toward CEC Investment in Research Centers**

The Energy Institute proposes three ways in which the CEC could fund UC and national laboratory research centers.

### *(1) Interagency Agreement*

The Energy Institute understands that the CEC can enter into an interagency agreement to make an award to a University of California-based center, subject to specified legislative oversight steps.<sup>4</sup> The unique, multi-topic nature of some centers would make them suitable for this approach. The Energy Institute would be eager to help the CEC to work with the legislature to put such an agreement in place.

### *(2) Use of Competitive Solicitations by the Center*

As an alternative to the CEC running a competitive solicitation to select a research center, the CEC could put in place agreements with UC-based research centers which would in turn run competitive solicitations to select individual projects. The Energy Institute has found this to be an effective and efficient way to select and fund projects.

As an example, from 2009 to 2014, the Energy Institute administered a UC-system wide "mini-grant" program through which energy and environmental economics projects were selected through annual competitive processes. The program was funded by the University of California's Office of the President. More recently, the E2e Project, a joint venture including the Energy Institute, administered a competitive solicitation for energy efficiency projects on behalf of the Sloan Foundation.<sup>5</sup>

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<sup>4</sup> California Energy Commission. 2014. *The Electric Program Investment Charge: Proposed 2015 2017 Triennial Investment Plan*. California Energy Commission. Publication Number: CEC-500-2014-038-CMF, p. 209.

<sup>5</sup> [http://e2e.haas.berkeley.edu/2016\\_EE\\_ResearchProjects.html](http://e2e.haas.berkeley.edu/2016_EE_ResearchProjects.html)

The Energy Institute understands that other centers have used similar processes.

This approach leverages the expertise that exists in the university and lab systems to identify attractive areas for research and development and select the best projects. Technical advisory groups, including CEC staff, can ensure that the projects align with the EPIC program's priorities.

*(3) Competitive Solicitation for Research Centers*

If the CEC chooses to put in place a competitive process to select research centers, the Energy Institute recommends that the CEC define the solicitations broadly enough to attract a significant number of proposals, but narrowly enough so that the center proposals can all be evaluated based on the same criteria.

For example, the CEC could issue one solicitation for centers focused on technology and a second one for centers focused on social science and policy. Proposals would need to demonstrate how they meet CEC EPIC requirements including furthering objectives of the EPIC program. The CEC could take into account whether a particular applicant has a track record of working with the CEC, and has demonstrated success leveraging the CEC funding to secure funding from other sources.

The Energy Institute hopes that these comments assists the CEC's development of the next investment plan and welcome further discussions regarding how to move forward with center funding.

Respectfully Submitted,

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