



(This is a Request for Information only - Complete Pages 1 and 2 for each initiative)

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12-EPIC-01

TN 72776

MAR 13 2014

Title of Proposed Initiative (Short and concise):

CalCEF Program: Maximizing the Role of Private Finance in EPIC-Funded Initiatives

Investment Areas (Check one or more) – For definitions, see *First Triennial Investment Plan, page 12*:

- Applied Research and Development
- Technology Demonstration and Deployment
- Market Facilitation

Electricity System Value Chain (Check only one): See CPUC Decision 12-05-037, Ordering Paragraph 12.a. http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF.

- Grid operations/market design
- Generation
- Transmission
- Distribution
- Demand-side management

Issues and Barriers:

Describe the issues and barriers that are impeding full market adoption of the proposed clean energy technology or strategy (such as cost, integration, or lack of information).

Initiative Description and Purpose:

How will this technology or strategy help address the issue/issues? Describe knowledge to be advanced to overcome critical barriers. Include the recommended funding level (minimum and maximum) for each project under this initiative.

Stakeholders:

Identify the stakeholders who support the initiative.

Background and the State-of-the-Art:

- What research development and demonstration has been done or is currently being done to advance this technology or strategy (cite past research as applicable)?
- Describe any public and/or private successes and failures the technology or strategy has encountered in its path through the energy innovation pipeline: lab-scale testing, pilot-scale testing, pre-commercial demonstration, commercial scale deployment, market research, workforce development.
- Identify other related programs and initiatives that deal with the proposed technology or strategy, such as state and federal programs or funding initiatives (DOE, ARPA-E, etc.).

EPIC TRIENNIAL INVESTMENT PLAN 2015-17
Proposed Energy Research Initiative
Questionnaire



Justification:

Describe how this technology or strategy will provide California IOU electric ratepayer benefits and provide any estimates of quantified annual savings/benefits in California, including:

- Name of sector and estimated size and energy use.
- Quantifiable performance improvements for the proposed technology/strategy.
- Maximum market potential, if successful.
- Number of direct jobs created in California.
- Why this research is appropriate for public funding.

Ratepayer Benefits (Check one or more):

- Promote greater reliability
- Potential energy and cost savings
- Increased safety
- Societal benefits
- Environmental benefits - specify
- GHG emissions mitigation/adaptation in the electricity sector at the lowest possible cost
- Low emission vehicles/transportation
- Waste reduction
- Economic development

Describe specific benefits (qualitative and quantitative) of the proposed initiative

Public Utilities Code Sections 740.1 and 8360:

Please describe how this technology or strategy addresses the principles articulated in California Public Utilities Code Sections 740.1 and 8360. The California Public Utilities Code is available online at www.leginfo.ca.gov/cgi-bin/calawquery?codesection=puc.



Responsive to February 2014 Workshop Question #1: *“How should the Energy Commission prioritize the top few technological areas or companies that should receive services?”*

The California Clean Energy Fund (CalCEF) proposes the creation of a market-facing partner for all California innovation support programs, principally and initially including EPIC, providing a range of decision support services to Commission staff.

The aim of this program is to reveal the perspective of private investors regarding specific technology opportunities of interest to the Commission, with an emphasis on market comparables and diligence that will help identify the critical milestones separating an early concept from follow-on private financing.

The result will be a tight focus on private capital allocation, demand trends, and procurement programs relevant to the awardee technologies, to maximize the leverage of public funding in the marketplace. Additionally, the program will help EPIC accrete a deeper level of understanding of relevant real-time private market activity and an increase in the program’s abilities to be impactful in the marketplace.

CalCEF’s analysis would be performed both pre- and post-investment, with the intent of helping the Commission to do the following:

1. Avoid duplicative allocation of capital;
2. Identify clear market signals regarding a technology’s viability, including the appropriate milestones to attach to an award; and
3. Determine how much EPIC investments have mobilized subsequent, private sector and other funding for the technology and its peer group.

Additional design parameters for the Proposal:

1. Advisory committees to the state’s leading innovation support program should be reformed, with the requirement that they produce real-time input to decision-making regarding investment trends and market analysis for the technology or project being considered. The proposed Program would lead in the development of this decision support intelligence.
2. Innovation funding should be coordinated with policy priorities and the regulatory processes that are driving these priorities (e.g., EPIC and SGIP funding for energy storage should coordinate with the CPUC-directed IOU storage rulemaking). The proposed Program would provide guidance to Commission staff in this regard.
3. Innovation support programs should use the tools appropriate to the stage of technology in question (e.g. grants for R&D, credit and credit support for the commercialization finance challenge). The Program would assist in developing and implementing funding models consistent with the stage of technology development and market segment targeted by the Investment Plan.
4. Innovative technologies or projects that are judged to be closer to commercial readiness should bear a heightened expectation that private capital will partner with public capital for execution (e.g. these proposals are presented with private capital identified, such that the state program can identify the “delta” or funding gap required). The Program would enable EPIC staff to query the private capital marketplace regarding co-finance prospects for a potential awardee.