

CALIFORNIA ENERGY COMMISSION

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January 27, 2014

To: Researchers and Other Interested Parties: QUESTIONNAIRE for 2015-2017 Triennial Investment Plan for the Electric Program Investment Charge

Questionnaire for applied research and development, technology demonstration and deployment, and market facilitation

The Electric Program Investment Charge (EPIC) provides electric public interest investments in applied research and development, technology demonstration and deployment, and market facilitation for clean energy technologies in accordance with California Public Utilities Commission's May 31, 2012, Phase 2 Decision 12-05-037, as modified.¹ The California Energy Commission, Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE), as the four administrators of the program, submitted coordinated investment plans to the CPUC for consideration on November 1, 2012. In November, 2013, CPUC Decision 13-11-025 modified and approved the first triennial investment plans of each program administrator. The portion of the EPIC Program administered by the Energy Commission will provide funding for applied research and development, technology demonstration and deployment, and market facilitation for clean energy technologies and approaches for the benefit of ratepayers of PG&E, SDG&E, and SCE.

Energy Commission staff is implementing its first EPIC investment plan, as modified and approved by the CPUC.² Competitive solicitations for initiatives in the first EPIC investment plan will be published soon. A schedule of upcoming EPIC funding opportunities and feedback opportunities for the Energy Commission's first EPIC investment plan is available online at www.energy.ca.gov/research/epic/.

The CPUC EPIC schedule calls for EPIC administrators, including the Energy Commission, to submit a proposed second EPIC investment plan by May 1, 2014.³ To meet this schedule, Energy Commission staff is now developing the second triennial investment plan for EPIC funds collected in 2015-17. The plan must be approved by the CPUC. Staff estimates the plan may include \$340 million for applied research and development, technology deployment and demonstration, and market facilitation. As part of this information gathering process for the second EPIC investment plan, the Energy Commission seeks ideas from interested parties on proposed initiatives in the topic areas of the electricity system "Value Chain," specifically grid operations/market design, generation, transmission, distribution, and demand-side management. The Energy Commission's second EPIC investment plan will build upon and follow the initiative format of the first triennial EPIC investment plan located at: www.energy.ca.gov/research/epic/documents/final_documents_submitted_to_CPUC/2012-11-01_EPIC_Application_to_CPUC.pdf as modified and approved by the CPUC in Decision 13-11-025, <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K773/81773445.PDF>.

¹ http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF

² Energy Commission, October 2013, The Electric Program Investment Charge: Proposed 2012-14 Triennial Investment Plan, in Application of the California Energy Commission for Approval of Electric Program Investment Charge Proposed 2012 through 2014 Triennial Investment Plan, Attachment 1, http://www.energy.ca.gov/research/epic/documents/final_documents_submitted_to_CPUC/2012-11-01_EPIC_Application_to_CPUC.pdf, as modified and approved by the CPUC in Decision 13-11-025, <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K773/81773445.PDF>.

³ CPUC Decision 12-05-037, Phase 2 Decision Establishing Purposes and Governance for Electric Program Investment Charge and Establishing Funding Collections for 2013-2020, http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF, page 31. CPUC Decision 13-04-030 modified Decision 12-05-037.

This is only a Request for Information; please do not submit proposals for funding.

Initiative ideas received, in response to this request, will be considered by Energy Commission staff in developing the second EPIC investment plan for funds collected in 2015-2017.

If you have applied research, development, technology demonstration, deployment or market facilitation ideas, please complete the attached initiative template. This template asks you to discuss your idea, identify why this research is appropriate for public funding, and include the issues/barriers that are impeding full market adoption of the clean energy technology/strategy addressed. Proposed initiatives will be compiled and posted on the Energy Commission website at: www.energy.ca.gov/research/epic/.

Here are some guidelines for completing the template:

1. The information contained in your initiative should be no more than three pages.
2. Complete one template per initiative. Multiple templates may be submitted, one for each separate initiative.
3. All proposed initiatives must advance science or technology and offer a reasonable probability of providing benefits to California Electric Investor Owned utilities (IOU) ratepayers and must meet the following criteria:
 - a. Focus on energy efficiency and demand-side management, generation, transmission and distribution, grid operation and market design issues.
 - b. Support state energy policy.
 - c. Consider opportunities for collaboration and co-funding with other entities.

Please e-mail suggested initiatives in a downloadable, searchable format such as Microsoft® Word (.doc) or Acrobat® (.pdf) by February 13, 2014. Please include the docket number 12-EPIC-01 and indicate "EPIC second investment plan" in the subject line. Send the completed initiative questionnaire to:

docket@energy.ca.gov and include in the CC line: Prab.Sethi@energy.ca.gov

A public workshop is scheduled in February, 2014 to focus on market facilitation. A draft second investment plan will be released in March, 2014 and a public workshop will be conducted to receive comments on the draft second investment plan.

Sincerely,

Laurie ten Hope
Deputy Director
Energy Research and Development Division



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

Title of Proposed Initiative (Short and concise):

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.).

**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.