



Pre-Application Workshop

**Developing the Smart Grid of 2020:
Clean, Safe, and Highly Intelligent**

GFO-15-313

Energy Research and Development Division
California Energy Commission
December 11, 2015



Agenda

Time	Topic
10:00 am	Welcome and Overview of EPIC
10:15 am	Solicitation Overview, Highlights
10:30 am	Application Requirements
11:00 am	Questions and Answers, Networking
11:45 am	Adjourn



Housekeeping

- In case of emergency
- Facilities
- Sign-In Sheet
- Diversity Survey
- Q&A protocol

Updates on solicitation documents and today's presentation will be posted at:

<http://www.energy.ca.gov/contracts/epic.html#GFO-15-313>



Commitment to Diversity

The Energy Commission adopted a resolution strengthening its commitment to diversity in our funding programs. We continue to encourage disadvantaged and underrepresented businesses and communities to engage in and benefit from our many programs.

To meet this commitment, Energy Commission staff conducts outreach efforts and activities to:

- Engage with disadvantaged and underrepresented groups throughout the state.
- Notify potential new applicants about the Energy Commission's funding opportunities.
- Assist applicants in understanding how to apply for funding from the Energy Commission's programs.
- Survey participants to measure progress in diversity outreach efforts.

Diversity survey online link: <https://www.surveymonkey.com/r/CEC-11-18-2015>

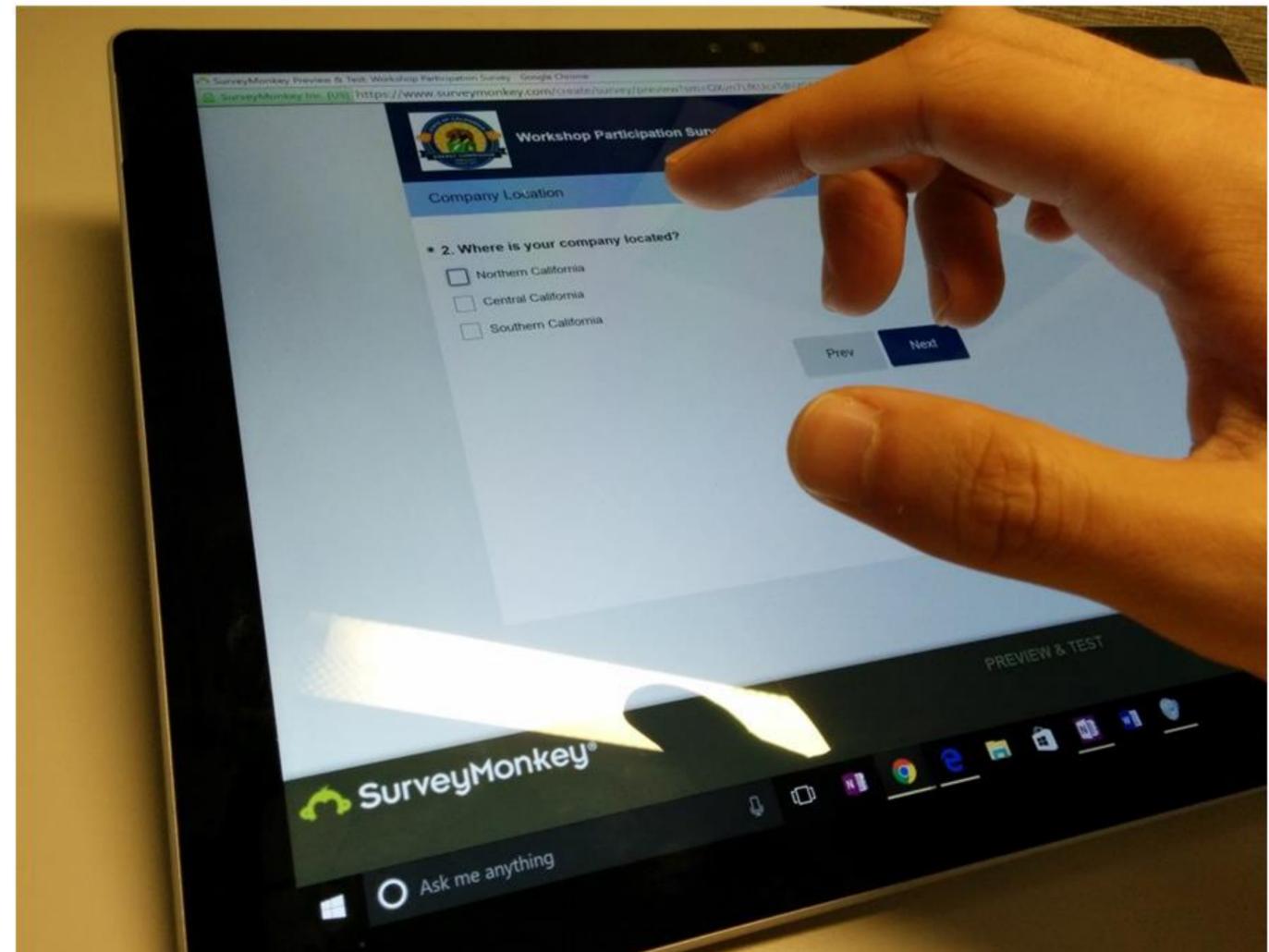


We Want to Hear From You!

1 Minute Survey

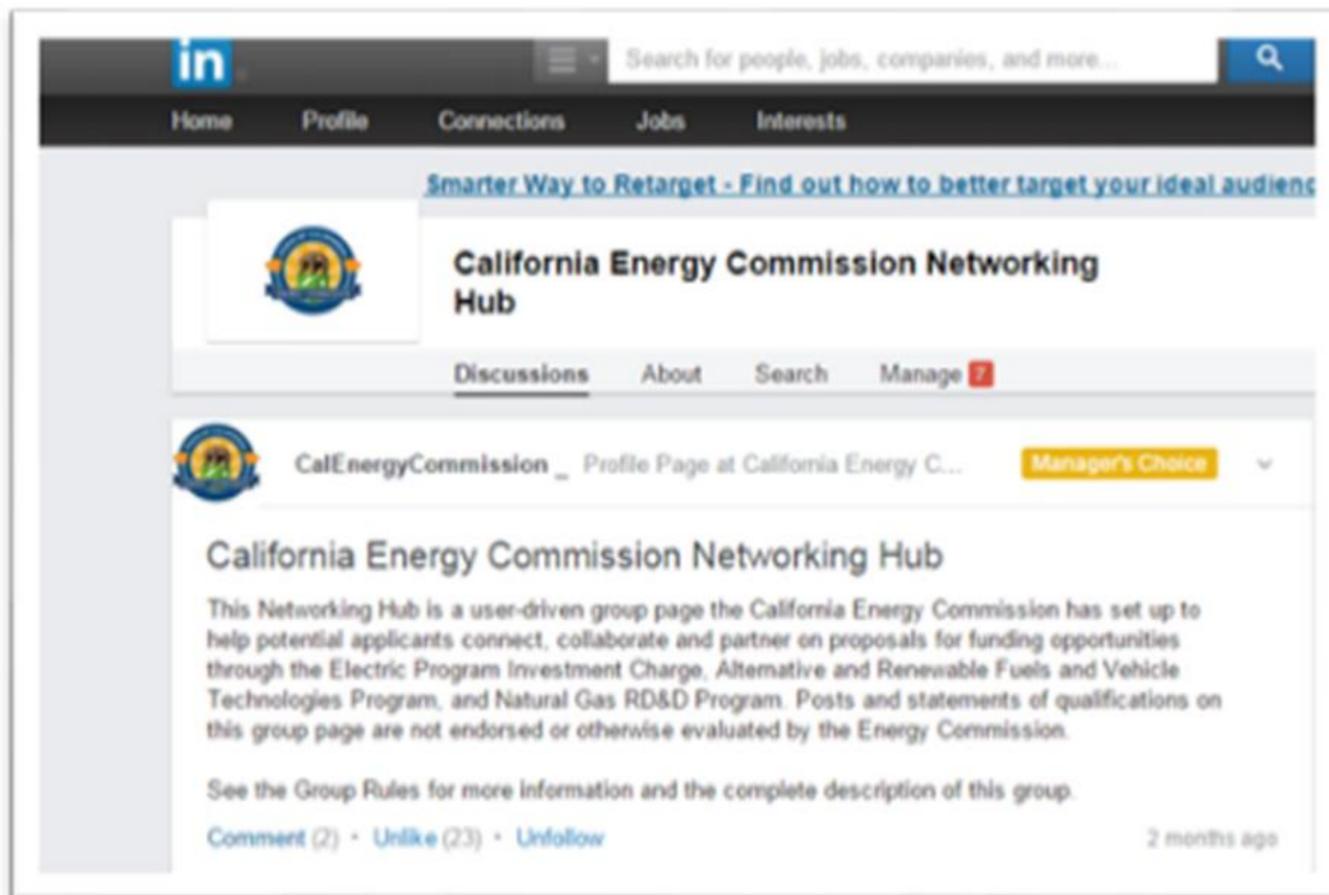
- The information supplied will be used for public reporting purposes to display anonymous overall attendance of diverse groups.
- Does your company identify as an underrepresented group?
- Where is your company located?
- How did you hear about the workshop?
- **Online survey for WebEx Participants:**

<https://www.surveymonkey.com/r/CEC-12-11-2015>





Connect With Us





Find Partners via LinkedIn

The Energy Commission has created a user-driven LinkedIn group page to help potential applicants **connect, collaborate** and **partner** on proposals for funding opportunities.

- Participants can join the “California Energy Commission Networking Hub” by:
 - Searching for the “California Energy Commission Networking Hub” group;
or
 - Entering this link into your browser:(bit.ly/CalEnergyNetwork)
- Once there, find various subgroups that relate to specific funding opportunities by checking the “About this group” section of the Networking Hub.



Background

- The Electric Program Investment Charge (EPIC) is funded by an electricity ratepayer surcharge established by the California Public Utilities Commission (CPUC) in 2011.
 - Annual program funds total \$162 million per year (adjusted for inflation) with 80% administered by the California Energy Commission.
- The purpose of EPIC is to:
 - Benefit the ratepayers of the three largest electric investor-owned utilities in California (PG&E, SDG&E, and SCE).
 - Fund clean energy technology projects that promote greater electric reliability, lower costs, and increased safety.
 - Encourage technological advancement and breakthroughs to overcome the barriers that prevent the achievement of the state's statutory energy goals.



California Policy Drivers

California has set ambitious targets for increasing the amount of renewable and distributed energy resources.

Applicable policies include:

- CPUC Energy Storage Decision and Assembly Bill 2514 (2010)
- Governor Brown's Clean Energy Jobs Plan (2011)
- Assembly Bill 327 – Distribution Resources Plans (2013)
- Renewables Portfolio Standard, as codified by Senate Bill 350 (2015)



Solicitation Purpose

- Fund applied research and development projects that develop technologies, tools, and strategies for the modern distribution system to enable the smart grid of 2020.
- Efficiently and reliably integrate distributed and renewable generation into California's electric grid.
- Upgrade distribution equipment, enhance automated distribution systems, and improve control over distributed energy resources.
- Revised draft solicitation after Scoping Workshop on 12/10/14 for Strategic Objectives S6 & S7.

EPIC 2012-2014 Triennial Investment Plan at:

http://www.energy.ca.gov/research/epic/documents/final_documents_submitted_to_CPUC/2012-11-01_EPIC_Application_to_CPUC.pdf



Eligible Applicants

- Public and private entities and individuals with exception of publicly-owned electric utilities. EPIC funds administered by the Energy Commission may not be used for any purposes associated with publicly-owned utility activities.
- Registered with the California Secretary of State and in good standing to enter into an agreement with the California Energy Commission.
<http://www.sos.ca.gov>
- Agree to the EPIC Grant Terms and Conditions **without negotiation**.
<http://www.energy.ca.gov/contracts/pier.html#epicterms>
 - Note sections for Amendments, Subcontractor Flow-Down Provisions, Payment of Funds, and Royalty Payments to the Commission.
 - Attachment 1: Confidential Products and Project-Relevant Pre-Existing and Independently Funded Intellectual Property



Eligible Projects

- **Applied Research and Development:** Activities that include strategies/analysis or early, pilot-scale testing activities that are necessary to demonstrate the feasibility of pre-commercial technologies.
- **Pre-commercial technology:** A technology that has not reached commercial maturity or been deployed at scales sufficiently large and in conditions sufficiently reflective of anticipated actual operating environments to enable the appraisal of operational and performance characteristics, or of financial risks.
- Not duplicative of projects funded by the Utility-Administered University of California Greenhouse Gas Research and Reduction Program or projects that build upon that research.



Funding & Project Groups

Group Number	Title	Funding Amount
1	Smart Grid Operation and Management Practices	\$500,000-1,500,000 per award; \$2,600,000 total
2	Distribution Automation Enhancements	\$500,000-\$2,500,000 per award; \$4,545,732 total
3	Bi-Directional Distribution Equipment, Devices, and Technologies	\$500,000-\$2,500,000 per award; \$4,545,731 total

- \$11,691,463 available for grants under this solicitation
- Match funding not required, but if provided, applications may get additional points during scoring phase.



Group 1: Smart Grid Operation and Management Practices (Funding Initiatives S6.3, S6.4, and S7.4)

- Develop grid operation and management practices, including those for outage management, low system inertia, congestion mitigation, and infrastructure protection that make use of smart grid equipment and renewable availability data.
- Meet all applicable safety requirements and, if applicable, NERC CIP requirements.
- Examples of projects include:
 - Developing best practices and applications in data analytics
 - Developing test procedures, algorithms, and protocols to validate the controllability of multiple assets for the integration of emerging smart grid equipment. Must not duplicate existing test procedures for individual devices, such as testing by UL or IEEE.



Group 2: Distribution Automation Enhancements (Funding Initiative S6.2)

- Enhance existing distribution automation systems to integrate distributed energy resources and improve grid reliability.
- Develop new and emerging technologies to increase the amount of renewables that can be connected at the distribution level and to provide greater control over the operation of distributed energy resources.
- Meet all applicable safety requirements and, if applicable, NERC CIP requirements.
- Examples of projects include:
 - Using smart meters for distribution automation functions.
 - Developing technologies and strategies for distribution systems to handle renewable generation issues.
 - Developing distributed energy resource management system controls for energy-smart communities and microgrids to handle renewable intermittency issues on distribution circuits.



Group 3: Bi-Directional Distribution Equipment, Devices, and Technologies (Funding Initiative S6.1)

- Advance the development and deployment of new technologies to improve the electrical distribution system for a more adaptable and controllable smart grid.
- Meet all applicable safety requirements and, if applicable, NERC CIP requirements.
- Examples of projects include:
 - Developing equipment, devices, sensors, and technologies to manage overloading flows, increase distribution circuit capacities, improve resiliency, and enable bi-directionality.
 - Developing power protection schemes for the bi-directional flows in the distribution system.
 - Developing technologies for measuring and determining phase balancing and phase identification of loads.



Key Dates

Activity	Action Date
✓ Solicitation Release	11/30/2015
Pre-Application Workshop	12/11/2015
<u>DEADLINE FOR WRITTEN QUESTIONS</u>	<u>12/11/2015 @ 5:00 pm</u>
Anticipated Distribution of Questions and Answers	Week of 12/28/2015
<u>DEADLINE TO SUBMIT APPLICATIONS</u>	<u>1/15/2016 @ 3:00 pm</u>
Anticipated Notice of Proposed Award (NOPA)	February 15, 2016
Anticipated Energy Commission Business Meeting Date	May 11, 2016
Anticipated Agreement Start Date	June 30, 2016
Agreement End Date	No later than March 29, 2019



Application Requirements

Each Applicant must complete and submit the following documents:

- | | |
|--|---|
| 1. Application Form – <i>Signature required</i> | 6. Fact Sheet |
| 2. Scope of Work | 7. Project Narrative |
| 3. Scope of Work: Project Schedule (Excel spreadsheet) | 8. CEQA Worksheet |
| 4. Budget (Excel Workbook) | 9. Project Team |
| 5. Contacts List | 10. References and Work Products |
| | 11. Commitment and Support Letters (as applicable) – <i>Signature(s) required</i> |



How will my application be evaluated?

Stage One: Administrative Screening

Application Screening Process

1. Energy Commission staff screens applications per the Screening Criteria in the solicitation.
2. Criteria is evaluated on a pass/fail basis.
 - ✓ An application must pass all screening criteria otherwise the application will be disqualified.

Some Reasons for Failing Screening

- ✓ Application not submitted by the specified due date and time.
- ✓ Requested funding is outside of the specified minimum or maximum amount.
- ✓ Proposed project completion date is past the specified agreement end date.
- ✓ Application does not include all the required documents.
- ✓ Application contains confidential material.



Stage Two: Application Scoring

- **Evaluation Committee applies the Scoring Scale to the Scoring Criteria.**
- **A minimum passing score of 70% is required for Criteria 1 through 4, and Criteria 1 through 7) —equivalent to a score of 49 and 70, respectively, for an application to be considered for funding.**
- **Each Applicant must review Section IV - Evaluation Process and Criteria section of the solicitation and ensure that its application provides a clear and complete response to each scoring criterion.**

Scoring Criteria (Page 30-35)	Maximum Points
1. Technical Merit and Need	20
2. Technical Approach	20
3. Impacts and Benefits for California IOU Ratepayers	20
4. Team Qualifications, Capabilities, and Resources	10
5. Budget and Cost-Effectiveness	10
6. EPIC Funds Spent in California	15
7. Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	5
Total	100
Minimum points to pass	70



What is important?

Scoring Criteria	The Main Question to Answer
1. Technical Merit and Need	Why should your project be funded under this solicitation?
2. Technical Approach	What decisions and assumptions did you make in developing the proposed Scope of Work and Project Schedule?
3. Impacts and Benefits for California IOU Ratepayers	How will the California IOU ratepayers benefit from the results of this proposed project? What might be the impact to reaching California energy policy goals?
4. Team Qualifications, Capabilities, and Resources	What relevant qualifications do the team members have to make this project happen, and what resources are available to make it happen?
5. Budget and Cost-Effectiveness	How are you spending money wisely for all the project activities and appropriately for the resulting benefits?
6. EPIC Funds Spent in California	Have you properly calculated and reported this amount in the budget forms?
7. Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	Have you accurately accounted for all labor and non-labor costs in the budget forms?



Related Information

- **Solicitation documents and today's presentation:**
www.energy.ca.gov/contracts/epic.html#GFO-15-313
- **Sign up for the Listserver by selecting "Opportunity:"**
www.energy.ca.gov/listservers/
- **Information on EPIC:**
www.energy.ca.gov/research/epic/index.html
- **Information on other EPIC solicitations:**
www.energy.ca.gov/contracts/epic.html



Contacts and Key Dates

Developing the Smart Grid of 2020: Clean, Safe, and Highly Intelligent
(GFO-15-313)

Contact: Diana Parmley – Contracts, Grants, and Loans Office

(916) 651-9409

diana.parmley@energy.ca.gov

Deadline to Submit Written Questions:

December 11, 2015 at 5:00 pm

Deadline to Submit Applications:

January 15, 2016 at 3:00 pm