



# Pre-Proposal Workshop

Driving the Integration of Electric Vehicles to Maximize  
Benefits to the Grid  
(PON-14-310)

Energy Research and Development Division  
California Energy Commission  
January 7, 2015



# Agenda

- Welcome and Introduction
- EPIC Program – Transportation Research Area
- PON Background
- Overview of Grant Solicitation Application Manual
- Questions and Answers



# Housekeeping

- In case of emergency
- Facilities
- Muting of WebEx during presentation
- Q&A protocol



# EPIC Program

- The Electric Program Investment Charge (EPIC) is funded by an electricity ratepayer surcharge established by the (CPUC) in 2011
- The purpose of EPIC is to benefit the ratepayers of three electric investor-owned utilities\*
- EPIC funds clean energy technology projects that promote greater electricity reliability, lower costs, and increased safety.
- Funded projects must lead to technological advancement and breakthroughs to overcome the barriers that prevent the achievement of the state's statutory energy goals.
- Annual program funds total \$162 million per year with 80% administered by the California Energy Commission.

*\*Pacific Gas and Electric Co., San Diego Gas and Electric Company and Southern California Edison*



# Transportation Policy Drivers

The following legislation and policy guide the Transportation subject area on meeting California's challenges:

- Governor's Executive Order (B-16-2012)
- Integrated Energy Policy Report
- ZEV Mandate
- Assembly Bill 32



# Transportation Research Goals

The goals of transportation-related projects are to:

- Reduce carbon emissions
- Decrease petroleum usage
- Improve natural gas and electricity infrastructure capacity, reliability, and sustainability
- Improve air quality



# Purpose of this Solicitation

To fund applied research and development projects that will provide maximum benefits to both the electricity grid and the PEV market through:

- Investigating and piloting strategies to advance smart charging
- Developing advanced grid communication interfaces for PEV charging to support vehicle-to-grid services



# Eligible Applicants and Requirements

- This is an open solicitation for public and private entities and individuals; with the exception of publicly-owned utilities
- Business Applicants are required to register with the California Secretary of State and be in good standing in order to enter into an agreement with the Energy Commission. <http://www.sos.ca.gov>
- All applicants must agree to the terms and conditions located at: [www.energy.ca.gov/research/epic](http://www.energy.ca.gov/research/epic)



# Funding Information

- Up to \$4 million funding is available under this solicitation for grant awards with a minimum funding amount of \$500,000 and a maximum funding amount of \$1.5 million for each project.

### Match Funding Requirements:

- Match funding is not required, however it will be considered for additional points during the scoring phase
- Letters of Commitment must be provided for all match funding to be considered



## Schedule

ACTIVITY	ACTION DATE
PON Release	December 18, 2014
Pre-Application Workshop	January 7, 2015
Deadline for Written Questions	January 7, 2015 (5:00 pm)
Anticipated Distribution of Questions & Answers	January 20, 2015
<b>Deadline to Submit Applications</b>	<b>February 6, 2015 (3:00 pm)</b>
Anticipated Notice of Proposed Award Posting Date	March 2015
Anticipated Commission Business Meeting Date	June 2015
Anticipated Agreement Start Date	August 2015
Agreement Termination Date	March 2018



# Advanced Smart Charging Goals

- Advance tools and methods beyond the current state of technology to enable real-time communication and dispatch of power flow to PEVs
- Give utilities and third parties the ability to access and control PEV charging while maintaining drivers mobility needs
- Provide recommendations to accelerate the deployment of smart charging
- Identify challenges and recommend solutions to commercializing smart charging technologies



# Advanced Smart Charging Technical Requirements

- Test and validate the developed smart charging technology
- Coordinate with applicable stakeholders
- Provide data such as benefits and economic analyses, methods for predicting charging behavior and associated grid impacts, and proposed adoption specifications
- Perform a benefits analysis that includes both quantitative and qualitative benefits to electricity ratepayers

*See Project Requirements Section of Application Manual for more details*



# Grid Interfaces for V2G Goals

- Develop and demonstrate communication interfaces that allow utilities to send dispatch signals in “real time” to optimize the charging/discharging of PEVs
  - Interfaces should be designed to accommodate the value of current and potential future grid services
- Develop a data warehouse strategy for the collection and dissemination of data
- Test and validate the developed technology and related systems
- Identify challenges and recommend solutions to accelerating the deployment of and commercializing V2G technologies



# Grid Interfaces for V2G Technical Requirements

- Interface designs must include protocols to allow for interoperability between vehicle, EVSE, and utility providers
- Leverage the use of existing communication protocols when applicable (SEP2, ISO/IEC 15118, OpenADR 2.0b, SAE J2847 and J2931)
- Test and validate the developed V2G technology and related systems
- Interface designs should be adaptive to local grid conditions
- Provide necessary data such as benefits and economic analyses, improved methods for predicting charging behaviors and associated impacts to the grid, and proposed adoption specifications
- Perform a benefits analysis that includes both quantitative and qualitative benefits to electricity ratepayers

*See Project Requirements Section of Application Manual for more details*



# Selection and Award Process

- Proposals will be screened based on the Screening Criteria identified in the Section IV of the Application Manual
- A scoring committee will score the projects using the scoring criteria described in Section IV of the Application Manual.
- The scoring committee may conduct optional interviews for clarification purposes.
- A minimum score of 49 points on criteria 1-4 and an over all score of 70 points is required to be eligible for funding.
- Project(s) will be recommended for funding starting with the highest ranked project meeting the minimum required score until all funds are exhausted.



# Proposal Requirements

- Application form with original signature (Attachment 1)
- Executive summary (Attachment 2)
  - Project description, objectives, and goals
- Fact Sheet (Attachment 3)
- Project narrative (Attachment 4)
  - Identify research topic that has been chosen
  - Addresses each of the evaluation criteria
  - Discussion on how the project will advance science and technology without duplicating existing work, and will provide clear benefits to electric ratepayers
- Project team description (Attachment 5)
- Scope of work with a task-by-task description of for each project.
  - See Work Statement Template (Attachment 6)



# Proposal Requirements Cont'd

- Schedule (Attachment 6a)
  - All work must be scheduled to be complete by **March 2018**
- Budget Workbook (Attachment 7)
  - Must be filled out completely and accurately
- CEQA Compliance Form (Attachment 8)
- References and Work Products (Attachment 9)
- Contact List (Attachment 10)
- Commitment and Support letters (Attachment 11)



# Proposal Guidelines

- Eight (8) hard copies including one with an original signature and a CD or USB
- Proposals should meet formatting requirements and page limits
- The original and copies must be labeled “Program Opportunity Notice PON-14-310” and include the title of the application and applicants name
- Proposals should **NOT** contain confidential information



# Grounds for Rejection

An application will be disqualified by the Energy Commission for the following reasons:

- Application contains false or misleading statements
- Application is intended to mislead the State in its evaluation
- The application does not comply with the solicitation requirements
- The application contains confidential information
- Applicant is not in compliance with royalty provisions from previous Energy Commission awards
- Applicant has received unsatisfactory evaluations from the Energy Commission or another California state agency
- Applicant has not demonstrated financial capability to complete the project
- Applicant is a business that is not in good standing with the California Secretary of State
- Application is not submitted in the format specified



# Attachments

1. Application Form/Cover Page (requires signature)
2. Executive Summary
3. Fact Sheet
4. Project Narrative
5. Project Team
6. Scope of Work
7. Budget Forms
8. CEQA Compliance Form
9. References and Work Product
10. Contract List
11. Commitment and Support Letters (signature required)



# Scoring Criteria

Technical Merit and Need	20
Technical Approach	20
Impacts and Benefits for Ca IOU Ratepayers	20
Team Qualifications, Capabilities and Resources	10
Budget and Cost Effectiveness	10
EPIC Funds Spent in Ca	15
Ratio of DL and Fringe to Loaded Labor Rates	5
<b>Total Points</b>	<b>100</b>
Preference Points for Match Funding	5



# Solicitation Documents

**Solicitation documents for Driving the Integration of  
Electric Vehicles to Maximize Benefits to the Grid  
(PON-14-310)**

<http://energy.ca.gov/contracts/epic.html#PON-14-310>

**Please make sure to read all addendums.**



# Questions and Answers

Written Questions are due:

**January 7, 2015 by 5 p.m.**

Please send all PON related questions to  
Janna Franks, Agreement Officer at:

[Janna.franks@energy.ca.gov](mailto:Janna.franks@energy.ca.gov)



# Thank You!

- Questions & Answers