



CALIFORNIA ENERGY COMMISSION

# Pre-Application Workshop

Electricity Sector Vulnerability Studies and  
Adaptation Options to Promote Resilience in a  
Changing Climate

**GFO-15-303**

Regional Climate Impacts and Adaptation Studies  
for the Natural Gas System and Other Environmental  
Related Issues

**PON-14-507**

California Energy Commission

April 3, 2015



# Housekeeping

- In case of emergency
- Facilities
- Sign-In Sheet
- Updates on Solicitation Documents and today's presentation can be found at:

<http://www.energy.ca.gov/contracts/epic.html#GFO-15-303>

<http://www.energy.ca.gov/contracts/epic.html#PON-14-507>



# Agenda

Time	Topic
10:00 am	RD&D Introduction <ul style="list-style-type: none"><li>• Policy Drivers</li><li>• Commitment to Diversity</li><li>• Eligible Applicants</li><li>• Key Dates</li></ul>
10:10 am	GFO-15-303 (EPIC) <ul style="list-style-type: none"><li>• Solicitation Background, Purpose &amp; Goals</li><li>• Research Project Groups</li></ul>
10:30 am	PON-14-507 (Natural Gas) <ul style="list-style-type: none"><li>• Solicitation Background, Purpose &amp; Goals</li><li>• Research Project Groups</li></ul>
10:50 am	Application Requirements (Both) <ul style="list-style-type: none"><li>• Formatting and Attachments</li><li>• Evaluation Process</li><li>• Grounds for Rejection</li></ul>
11:15 am	Questions and Answers



# Policy Drivers for Environmental-Energy RD&D

- Laws and Regulations:
  - AB 32 (Global Warming Solutions Act)
  - AB 1002 (Natural Gas Research)
  - SB X1-2 (Renewable Portfolio Standard)
- Policies/Plans
  - Governor Brown's Clean Energy Jobs Plan
  - *Integrated Energy Policy Report*
  - *Safeguarding California: Reducing Climate Risk*
  - *Climate Change Research Plan*
  - *California's Climate Change Assessments\**

\*This solicitation includes energy sector vulnerability and adaptation research projects that will contribute to California's Fourth Climate Change Assessment.



# Commitment to Diversity

The Energy Commission is committed to ensuring participation in its Research and Development programs reflect the rich and diverse characteristics of California and its people. To meet this commitment, Energy Commission staff conducts outreach efforts and activities to:

- Ensure potential new applicants throughout the state are aware of the Energy Commission's Research and Development programs and the funding opportunities they provide.
- Encourage greater participation by underrepresented groups including disabled veteran-, women-, and minority-owned businesses.
- Assist applicants in understanding how to apply for funding from the Energy Commission's Research and Development programs.



## Eligible Applicants

- This is an open solicitation for public and private entities.
- Applicants must accept the EPIC/NG terms and conditions.
- 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>.
- Applicants must propose a team that has demonstrated the ability to successfully complete similar research or demonstration projects.



# Key Dates

Activity	Action Date
Pre-Application Workshop	April 3, 2015
<b><u>DEADLINE FOR WRITTEN QUESTIONS</u></b>	<b><u>April 8, 2015 by 5:00 p.m.</u></b>
Post Questions and Answers to Website	April 20, 2015
<b><u>DEADLINE TO SUBMIT APPLICATIONS</u></b>	<b><u>May 26, 2015 by 3:00 p.m.</u></b>
Post Notice of Proposed Award (NOPA)	July 29, 2015
Anticipated Energy Commission Business Meeting Date	September 9, 2015
Anticipated Agreement Start Date	October 1, 2015
Agreement Termination Date	June 30, 2019



# Electricity Sector Vulnerability Studies and Adaptation Options to Promote Resilience in a Changing Climate

**GFO-15-303**  
**(EPIC)**





# Background

- The Electric Program Investment Charge (EPIC) is funded by an electricity ratepayer surcharge established by the California Public Utilities Commission (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 Co., and Southern California Edison



## Purpose

- Fund applied research and development projects that reduce the environmental impacts of electricity generation and make the electricity system less vulnerable to climate impacts, supporting timely implementation of adaptation strategies and development of decision-support tools that will enhance the climate resilience of the electric system through the following project groups:
  - **Group 1:** Potential Impacts and Adaptation Options for the Electricity System from Sea Level Rise
  - **Group 2:** Wildfires, Climate Change, and Impacts to Transmission and Distribution Lines
  - **Group 3:** Development of Innovative Strategies to Foster a More Adaptive, Resilient Energy System under Present and Future Climate Conditions
  - **Group 4:** Visualizing Climate-Related Risks to the Electricity System Using Cal-Adapt
  - **Group 5:** Developing Enhanced Socioeconomic and Land-Use Scenarios
- Funded projects must benefit California IOU electric ratepayers.



## Goals

- **Group 1:** Study **vulnerability** and **adaptation** options for the coastal electricity infrastructure (e.g., power plants, substations, power lines) at a level of detail that can inform actual planning and regulatory activities.
- **Group 2:** Explore the exposure and sensitivity of existing transmission and distribution lines to **wildfire projections** as well as implications of wildfire risks in areas that are candidates for new transmission capacity.
- **Group 3:** Investigate innovative **grid management and operation strategies** to overcome **climate-related limitations** or potential disruptions in power transmission as well as climate-related limitations to the grid's ability to make use of intermittent renewable generation due to climate change.
- **Group 4:** Provide critical support to convey science regarding **climate-related risks** to the electricity sector and foster planning to protect infrastructure, ratepayers, and vulnerable populations.
- **Group 5:** Develop enhanced **socioeconomic and land-use scenarios** for California to support energy sector planning and management.



# Project Groups

- Up to \$2.1 million available in the following groups.
  - Funding amounts may be modified or moved among the groups.

<b>Project Group</b>	<b>Available Funding</b>	<b>Maximum Award Amount</b>
Group 1: Potential Impacts and Adaptation Options for the Electricity System from Sea Level Rise	\$500,000	\$500,000
Group 2: Wildfires, Climate Change, and Impacts to Transmission and Distribution Lines	\$500,000	\$500,000
Group 3: Development of Innovative Strategies to Foster a More Adaptive, Resilient Energy System under Present and Future Climate Conditions	\$500,000	\$500,000
Group 4: Visualizing Climate-Related Risks to the Electricity System Using Cal-Adapt	\$400,000	\$400,000
Group 5: Developing Enhanced Socioeconomic and Land-Use Scenarios	\$200,000	\$200,000



## Project Groups

- Each group will be evaluated and scored separately.
- Each Application must address only one project group.
- Applicants may submit more than one Application as long as each is for a distinct scope of work, with no duplication.



## Group 1: Potential Impacts and Adaptation Options for the Electricity System from Sea Level Rise

(\$500,000 per award\*)

### Funded Activities Include:

- Determine which existing coastal power plants and electricity facilities would be affected by SLR events, taking into consideration current protection measures.
- Develop detailed actions needed to protect the existing energy infrastructure from SLR in the next 10 to 30 years and discuss potential protection measures that would be needed to the end of this century.
- Cover at least one geographical subunit in California (local or regional) and work very closely with the affected electric IOU and the relevant local and regional agency or agencies.
- Consider potential indirect effects such as the impacts of SLR and coastal storms on services needed to operate affected electricity infrastructure (e.g., effects on fuel supply).

*\*This funding opportunity could be used as seed funding for other related studies for the selected geographical area as long as complementary non-electricity studies are supported by external sources.*



## Group 2: Wildfires, Climate Change, and Impacts to Transmission and Distribution Lines (\$500,000 per award)

### Funded Activities Include:

- Review historic data on outages caused by wildfires for perspective on the types of risks that electricity infrastructure already faces and identify key factors that affect the exposure and sensitivity of T&D circuits to past fires.
- Assess the change in exposure of existing transmission lines under the new wildfire scenarios (being developed by Leroy Westerling, UC Merced) and the change in wildfire exposure in areas that are candidates for new transmission capacity.
- Assess sensitivity of distribution circuits to wildfire, considering the number of customers and key assets that could be affected by an outage.
- Model timescales associated with the transition of individual transmission segments and distribution circuits into “high-risk” status with respect to wildfire.
- Develop map(s) of wildfire risk metrics that can inform local adaptation planning.
- Project how sensitivity of distribution circuits may change as the grid evolves and adapts.



## **Group 3: Development of Innovative Strategies to Foster a More Adaptive, Resilient Energy System under Present and Future Climate Conditions**

**(\$500,000 per award)**

### **Funded Activities Include:**

- Investigate technologies or ideas that may improve the energy system's resilience under current and future climate conditions.
- Identify inefficient aspects of electricity transmission and distribution systems and provide innovative, feasible solutions that also improve climate resilience.





## **Group 4: Visualizing Climate-Related Risks to the Electricity System Using Cal-Adapt** **(\$400,000 per award)**

### **Funded Activities Include:**

- Develop tools for visualizing vulnerability of electricity generation, transmission, and distribution facilities to storm events and sea level rise.
- Develop tools for visualizing other climate-related risks or extreme weather events.
- Develop and/or support custom tools to support planning, management, and operations of the electricity system.
- Communicate and do outreach regarding climate change-related vulnerabilities to, and adaptation options for, the electricity sector.
- Communicate and do outreach regarding case studies of climate adaptation in the electricity sector.



## **Group 5: Developing Enhanced Socioeconomic and Land-Use Scenarios** **(\$200,000 per award)**

### **Funded Activities Include:**

- Align with socioeconomic projections produced by California's Department of Finance, and enhance these projections to respond to energy sector planning needs.
- Leverage the U.S. Environmental Protection Agency's ongoing work designed to improve the Integrated Climate and Land Use Scenarios model (ICLUS).
- Consider energy-related environmental justice issues and link to existing resources, such as California's Office of Environmental Health Hazard Assessment's CalEnviroScreen.
- Develop different urban, suburban, and ex-urban scenarios using alternative assumptions about growth drivers.



# Regional Climate Impacts and Adaptation Studies for the Natural Gas System and Other Environmental Related Issues

**PON-14-507**  
(Natural Gas RD&D)



# Background

- The Natural Gas Research, Development and Demonstration Program is funded by a natural gas ratepayer surcharge established by the California Public Utilities Commission (CPUC) in 2000.
- The purpose of Natural Gas RD&D is to benefit the ratepayers of three natural gas investor-owned utilities.\*
- Natural Gas RD&D funds clean energy technology projects that promote greater natural gas 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 \$24 million, administered by the California Energy Commission.

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



## Purpose

- Support research that addresses natural gas sector climate resilience policy, implementation, and management needs through the following project groups:
  - **Group 1:** Regional Studies (I-IV) – Investigate Climate Vulnerability of the Natural Gas Energy System and Identify Resilience Options
  - **Group 2:** Assessment of Fugitive Methane Emissions from the Natural Gas System – Commercial Buildings
  - **Group 3:** Probabilistic Seasonal and Decadal Forecasting for the Natural Gas System
  - **Group 4:** Assessment of Current and Potential Environmental Benefits of Residential Solar Water Heating in California Drawing on Installed Performance and User Experience
- Funded projects must benefit California NG IOU ratepayers.



## Goals

- **Group 1:** Support four “bottom-up,” regional level **vulnerability** and **adaptation** studies that consider regional impacts to the natural gas system due to climate-related risks.
- **Group 2:** Conduct a systematic survey of **methane emissions** downstream of the meter from commercial structures.
- **Group 3:** Develop, enhance, and test new methods to produce **probabilistic climate forecasts** for the natural gas system.
- **Group 4:** Provide an improved basis for assessing current and achievable environmental benefits of **solar-thermal water heating** and provide real-world observations regarding factors that inhibit residential solar thermal technology adoption.



# Project Groups

- Up to \$3,327,000 available in the following groups.
  - Funding amounts may be modified or moved among the groups.

<b>Project Group</b>	<b>Available Funding</b>	<b>Maximum Award Amount</b>
Group 1: Regional Studies (I-IV) – Investigate Climate Vulnerability of the Natural Gas Energy System and Identify Resilience Options	\$1,827,000	\$456,750
Group 2: Assessment of Fugitive Methane Emissions from the Natural Gas System – Commercial Buildings	\$600,000	\$600,000
Group 3: Probabilistic Seasonal and Decadal Forecasting for the Natural Gas System	\$400,000	\$400,000
Group 4: Assessment of Current and Potential Environmental Benefits of Residential Solar Water Heating in California Drawing on Installed Performance and User Experience	\$500,000	\$500,000



## Project Groups

- Each group will be evaluated and scored separately.
- Each Application must address only one project group.
- Applicants may submit more than one Application as long as each is for a distinct scope of work, with no duplication.





## **Group 1: Regional Studies (I-IV) – Investigate Climate Vulnerability of the Natural Gas Energy System and Identify Resilience Options** (**\$456,750 per award\***)

### **Funded Activities Include:**

- Explore, in geographically diverse regions of California, regionally appropriate management options to increase resilience to climate change-related vulnerabilities.
- Explore vulnerability of coastal natural gas storage, transmission, and distribution facilities to storm events and sea level rise.
- Explore other climate change risks and extreme weather events, including inland flooding; mudslides; wildfires; and drought, that could affect the natural gas system in the study region.
- Explore threats to natural gas infrastructure from climate change (e.g., corrosion of pipes or tanks, prolonged pressure from floodwaters) and adaptation options.



## **Group 2: Assessment of Fugitive Methane Emissions from the Natural Gas System – Commercial Buildings** (**\$600,000 per award**)

### **Funded Activities Include:**

- Measure fugitive methane emissions from commercial buildings.
- Quantify total building emissions as well as emissions from specific appliances or system components where significant leaks are identified.



## **Group 3: Probabilistic Seasonal and Decadal Forecasting for the Natural Gas System** **(\$400,000 per award)**

### **Funded Activities Include:**

- Improve seasonal probabilistic forecasts to estimate the likelihood of weather conditions that affect natural gas demand.
- Improve decadal probabilistic forecasts in a way that can be used by the Energy Commission in their 10- to 20-year energy demand forecasts for annual and seasonal natural gas demand.
- Implement a preliminary demonstration phase of this work allowing stakeholders to access and assess the value of the probabilistic forecasts.



## **Group 4: Assessment of Current and Potential Environmental Benefits of Residential Solar Water Heating in California Drawing on Installed Performance and User Experience (\$500,000 per award)**

### **Funded Activities Include:**

- Use empirical measurements to clarify environmental benefits, such as reduced greenhouse gas emissions, of current residential solar-thermal water heating installations.
- Identify technical and human factors that affect environmental as well as economic performance of residential SWH.
- Delineate opportunities for improving environmental and economic performance of residential SWH in California.
- Provide a basis for integration of achievable benefits of residential SWH into long-term simulations of the energy system using capacity expansion models.



# Application Requirements



# Application Requirements

- Submit Applications with all attachments in the order specified by the due date and time listed.
- Application documents should meet formatting requirements, page limits, and number of copies specified (page 23 – EPIC; page 20 – NG).
  - **Six** hard copies and **one** electronic copy
- Evaluation Consists of Two Parts
  - Part 1 – Application Screening (Section E)
  - Part 2 – Application Scoring (Section F)



# Application Requirements (continued)

**Every Applicant must complete and include the following:**

1. Application Form	7. Budget
2. Executive Summary	8. CEQA Compliance Form
3. Fact Sheet	9. References and Work Product
4. Project Narrative	10. Contact List
5. Project Team	11. Commitment Letters (required for match funding)
6. Scope of Work	



# Application Form (Attachment 1)

- Form provides the Energy Commission with basic information about the Applicant and project.
- Must include all information requested.
- Must be signed by an authorized representative of the Applicant's organization.
- Information provided should be consistent with project budget, narrative, and letters of commitment.





# Executive Summary Form (Attachment 2)

- Executive Summary should summarize the information included in the project narrative.
- Must include:
  - A project description
  - The project goals and objectives to be achieved
  - An explanation of how the goals and objectives will be achieved, quantified, and measured
  - A description of the project tasks and overall management of the agreement
- Limited to **two** pages.



## Fact Sheet Template (Attachment 3)

- Must present project information in a manner suitable for publication (if funded).
- The fact sheet must follow the template provided, including:
  - A summary of project specifics
  - A description of the issue addressed by the project
  - A project description
  - Anticipated benefits for the State of California
- Limited to **two** pages.



## Project Narrative (Attachment 4)

- Project Narrative form follows the Application Scoring Criteria (Section F)
- Include a detailed description of the proposed project(s) and respond to the information requested in each of the following areas:
  1. Technical Merit and Need
  2. Technical Approach
  3. Impacts and Benefits for California Ratepayers
  4. Team Qualifications, Capabilities and Resources
  5. Budget and Cost Effectiveness
  6. Funds Spent in California
  7. Ratio of Unloaded Labor Rates to Loaded Labor Rates
  8. Match Funding (optional)
- Provide sufficient detail so that reviewers will be able to evaluate the proposal against each of the scoring criteria.
- Limited to **20** pages.



## Project Team Form (Attachment 5)

- Must identify all key personnel assigned to the project.
  - “Key personnel” are individuals that are critical to the project due to experience, knowledge, and/or capabilities.
- Clearly describe their individual areas of responsibility.
- Include a resume for each individual.
  - Limited to **two** pages for each resume.



## Scope of Work (Attachment 6)

- Ensure that the problem/Solution Statement and Goals and Objectives are consistent with the Project Narrative.
- All tasks in black are mandatory and cannot be revised:
  - Task 1: General Project Tasks
  - Task [TBD-1]: Evaluation of Project Benefits
  - Task [TBD-2]: Technology/Knowledge Transfer Activities
  - Task [TBD-3]: Production Readiness Plan (only applicable to agreements that fund the development of products that may be commercialized)
- Task 2 are the technical tasks:
  - Indicate specific tasks in the “Recipient Shall” section (these should be major items).
  - “Products” are documents, plans and reports (tangible items that can be submitted to the CAM).
  - “Products” are not equipment and other items that cannot be delivered and stored at the Energy Commission.



# Project Schedule (Attachment 6A)

- Provide meeting and product titles and the due dates.
- All of the products must match as shown in the Scope of Work (Attachment 6).



## Budget (Attachment 7)

**Every Applicant must complete and include the budget forms for its team:**

- ✓ Task Summary – Att B-1
- ✓ Category Summary – Att B-2
- ✓ Prime Labor Rates – Att B-3
- ✓ Labor Rates for each Subcontractor – Att B-3a-z
- ✓ Prime Non-Labor Rates – Att B-4
- ✓ Non-Labor Rates for each Subcontractor – Att B-4 a-z
- ✓ Direct Operating Expenses – Att B-5
- ✓ Match Funding – Att B-6
- ✓ Rates Summary – Att B-7 (for evaluation purposes)

Don't delete sheets or rows; use the hide/expand function.

The Applicant must submit information on **all** of the attached budget forms, and in the format required.



# California Environmental Quality Act (CEQA) Compliance Form (Attachment 8)

- The information provided will help facilitate Energy Commission's environmental evaluation of the proposed project under CEQA.
- All sections of the form must be completed.
- Failure to complete CEQA process in a timely manner may result in cancellation of the award.





# Reference and Work Product Form (Attachment 9)

- This form contains two sections:
- Section 1: References
  - Provide applicant and subcontractor references as instructed.
  - Include three references for Applicant and two for each subcontractor.
- Section 2: Work Products
  - Provide a list of up to three past projects detailing technical and business experience of the applicant or team member (two pages maximum per project).
  - Include copies of up to three recent relevant technical publications.



# Contact List Template (Attachment 10)

- Identifies the names and contact information of the project manager, administrator, and accounting officer.
- Applicant should complete the information in the “Recipient” column shown in blue text.
- Energy Commission staff will complete the information in the “California Energy Commission” column.



# Commitment and Support Letter Form (Attachment 11)

- This form provides guidelines for the submission of letters of support or commitment that are submitted with the application.
  - Commitment letter commits an entity to providing the service or funding described.
  - Support letter details an entity or individual's support for the project.
- If the project involves a pilot test or a demonstration site, a commitment letter must be included from the host site.
- Any project partners that will make other contributions to the project must submit a commitment letter.
- Any match funding provided must be supported by a match fund commitment letter.
- Support letters are optional.
- Limited to **two pages** per letter, excluding the cover page.



# How will my Proposal be Evaluated?

## → Application Screening

### Application Screening Process (page 31)

1. Energy Commission staff screens applications per criteria in the solicitation (Section E).
2. Criteria is evaluated on a pass/fail basis.
  - ✓ Applicants must pass all screening criteria or the applicant will be disqualified.
  - ✓ Applicants must review the Evaluation and Award Process section of the solicitation and ensure that the Project Narrative provides a clear and complete response to each screening criteria.

### Some Reasons for Failing Screening

- ✓ Application not submitted by the specified due date and time.
- ✓ Applicant did not address one of the eligible research topic areas.
- ✓ Requested funding is outside of the specified minimum/maximum range.
- ✓ Project completion date beyond the specified agreement end date.
- ✓ Application contains confidential material.



# What is the technical scoring scale?

% of Possible Points	Interpretation	Explanation for Percentage Points
0%	Not Responsive	<ul style="list-style-type: none"> <li>The response does not include or fails to address the criteria.</li> <li>The omission(s), flaw(s), or defect(s) are significant and unacceptable.</li> </ul>
10-30%	Minimally Responsive	<ul style="list-style-type: none"> <li>The response minimally addresses the criteria.</li> <li>The omission(s), flaw(s), or defect(s) are significant and unacceptable.</li> </ul>
40-60%	Inadequate	<ul style="list-style-type: none"> <li>The response addresses the criteria.</li> <li>There are one or more omissions, flaws, or defects or the criteria are addressed in a limited way that results in a low degree of confidence in the proposed solution.</li> </ul>
70%	Adequate	<ul style="list-style-type: none"> <li>The response adequately addresses the criteria.</li> <li>Any omission(s), flaw(s), or defect(s) are inconsequential and acceptable.</li> </ul>
80%	Good	<ul style="list-style-type: none"> <li>The response fully addresses the requirements being scored with a good degree of confidence in the applicant's response or proposed solution.</li> <li>There are no identified omission(s), flaw(s), or defect(s). Any identified weaknesses are minimal, inconsequential, and acceptable.</li> </ul>
90%	Excellent	<ul style="list-style-type: none"> <li>The response fully addresses the criteria with a high degree of confidence in the applicant's response or proposed solution.</li> <li>The applicant offers one or more enhancing features, methods, or approaches that exceed basic expectations.</li> </ul>
100%	Exceptional	<ul style="list-style-type: none"> <li>All requirements are addressed with the highest degree of confidence in the applicant's response or proposed solution.</li> <li>The response exceeds the requirements in providing multiple enhancing features, a creative approach, or an exceptional solution.</li> </ul>



# How will my application be evaluated?

- **Evaluation Committee applies the scoring scale to the scoring criteria.**
- **A minimum passing score of 70% is required for criteria 1 to 4 – equivalent to a score of 49 in order for an Application to be considered for funding, and**
- **A total minimum passing score of 70 out of 100 points is needed for all criteria (1 to 7).**
- **Applicants must review the Evaluation and Award Process section of the solicitation and ensure that their application provides a clear and complete response to each scoring criteria in the project narrative.**

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



# Technical Merit and Need (Criterion 1)

- Provides a clear and concise description of the goals, objectives, technological or scientific knowledge advancement, and innovation in the proposed project.
- Explains how the proposed project will lead to technological advancement and breakthroughs that overcome barriers to achieving the state's statutory energy goals.
- Summarizes the current status of the relevant technology and/or scientific knowledge, and explains how the proposed project will advance, supplement, and/or replace current technology and/or scientific knowledge.
- Justifies the need for funding, including an explanation of why the proposed work is not adequately supported by competitive or regulated markets.
- Discusses the degree to which the proposed work is technically feasible and achievable.
- Provides a clear and plausible measurement and verification plan that describes how energy savings and other benefits specified in the application will be determined and measured.



## Technical Approach (Criterion 2)

- Describes the technique, approach, and methods to be used in performing the work described in the Scope of Work. Highlights any outstanding features.
- Describes how tasks will be executed and coordinated with various participants and team members.
- Identifies and discusses factors critical for success, in addition to risks, barriers, and limitations. Provides a plan to address them.
- Describes how the knowledge gained, experimental results, and lessons learned will be made available to the public and key decision-makers.





# Impacts and Benefits for California Ratepayers (Criterion 3)

- Explains how the proposed project will benefit California ratepayers (e.g., greater reliability, lower costs, and/or increased safety).
- Provides clear, plausible, and justifiable **quantitative** estimates of potential benefits for California ratepayers, including the following (*as applicable*): annual electricity and thermal savings (kilowatt-hour and therms), peak load reduction and/or shifting, energy cost reductions, greenhouse gas emission reductions, air emission reductions (e.g., NO<sub>x</sub>), and water use and/or cost reductions.
- States the timeframe, assumptions, and calculations for the estimated benefits, and explains their reasonableness.
- Discusses any **qualitative** or intangible benefits to California ratepayers, including timeframe and assumptions.



## Team Qualifications, Capabilities, and Resources (Criterion 4)

- Describes the organizational structure of the applicant and the project team. Includes an organizational chart that illustrates the structure.
- Identifies key team members, including the project manager and principal investigator (*include this information in Attachment 5, Project Team Form and Attachment 10, Contact List*).
- Summarizes the qualifications, experience, capabilities, and credentials of the key team members (*include this information in Attachment 5, Project Team Form*).
- Explains how the various tasks will be managed and coordinated, and how the project manager's technical expertise will support the effective management and coordination of all projects in the application.
- Describes the facilities, infrastructure, and resources available to the team.
- Describes the team's history of successfully completing projects (e.g., RD&D projects) and commercializing and/or deploying results/products.
- Identifies past projects that resulted in a market-ready technology (*include this information in Attachment 9, Reference and Work Product Form*).
- References are current, meaning within the past three years (*include this information in Attachment 9, Reference and Work Product Form*).



## Team Qualifications, Capabilities, and Resources (Criterion 4) (cont'd)

- Identifies any collaborations with utilities, industries, or others. Explains the nature of the collaboration and what each collaborator will contribute.
- Demonstrates that the applicant has the financial ability to complete the project, as indicated by the responses to the following questions:
  - Has your organization been involved in a lawsuit or government investigation within the past ten years?
  - Does your organization have overdue taxes?
  - Has your organization ever filed for or does it plan to file for bankruptcy?
  - Has any party that entered into an agreement with your organization terminated it, and if so for what reason?
  - For Energy Commission agreements listed in the application that were executed (i.e., approved at a Commission business meeting and signed by both parties) within the past five years, has your organization ever failed to provide a final report by the date indicated in the agreement?
- Support or commitment letters (for match funding, test sites, or project partners) indicate a strong level of support or commitment for the project.



## Budget and Cost-Effectiveness (Criterion 5)

- Justifies the reasonableness of the requested funds relative to the project goals, objectives, and tasks.
- Justifies the reasonableness of costs for direct labor, non-labor (e.g., indirect overhead, general and administrative costs, and subcontractor profit), and operating expenses by task.
- Explains why the hours proposed for personnel and subcontractors are reasonable to accomplish the activities in the Scope of Work (Attachment 6).
- Explains how the applicant will maximize funds for technical tasks and minimize expenditure of funds for program administration and overhead.



## Funds Spent in California (Criterion 6)

- Projects that spend funds in California will receive points as indicated in the table below. “Spent in California” means that: (1) Funds under the “Direct Labor” category and all categories calculated based on direct labor in the B-4 budget attachments (Prime and Subcontractor Labor Rates) are paid to individuals who pay California state income taxes on wages received for work performed under the agreement; and (2) Business transactions (e.g., material and equipment purchases, leases, rentals, and contractual work) are entered into with a business located in California.

Percentage of funds spent in CA (derived from budget attachment B-2)	Percentage of Possible Points
>60%	20%
>70%	40%
>80%	60%
>90%	80%
>100%	100%

- Airline ticket purchases and payments made to out-of-state workers are not considered funds “spent in California.” However, funds spent by out-of-state workers in California (e.g., hotel and food) are considered funds “spent in California.”



## **Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates (Criterion 7)**

- The score for this criterion will derive from the Rates Summary worksheet (Tab B-7) in the budget forms, which compares the weighted direct labor and fringe benefits rate to the weighted loaded rate. This ratio, as a percentage, is multiplied by the possible points for this criterion.



## Project Match Funds (Criterion 8)

- Match funding is not required.
- Applications with match funds will receive additional points during the scoring phase (up to 5 points).
- Points applied only for those that achieve a minimum score of 70.
- Match funding includes cash in hand, equipment, materials, information technology services, travel, subcontractor costs, contractor in-kind labor, advanced practice costs.
  - Refer to Section 1, item D-2 of the Application manual, pages 5-6.
  - Advanced practice costs means the incremental cost difference between standard and advanced practices.
- Match funding sources may include those from the prime Applicant, subcontractors, and pilot test sites (e.g., test site staff services).
- Commitment letters are required from all match fund contributors (see requirements in Attachment 11).



# California-Based Entity (NG only - Criterion 9)

- Preference points are awarded to California-Based Entities (CBEs).
- Points applied only for those that achieve a minimum score of 70.
- A California-Based Entity (CBE) Form (Attachment 12) must be completed and submitted as part of the application package.
- Energy Commission staff will verify CBE status and award 5 preference points to CBEs.





## Grounds for Rejection

- An application may be rejected 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.
  - ✓ The application is not submitted in the format specified.



# Key Dates

Activity	Action Date
Pre-Application Workshop	April 3, 2015
<b><u>DEADLINE FOR WRITTEN QUESTIONS</u></b>	<b><u>April 8, 2015 by 5:00 p.m.</u></b>
Post Questions and Answers to Website	April 20, 2015
<b><u>DEADLINE TO SUBMIT APPLICATIONS</u></b>	<b><u>May 26, 2015 by 3:00 p.m.</u></b>
Post Notice of Proposed Award (NOPA)	July 29, 2015
Anticipated Energy Commission Business Meeting Date	September 9, 2015
Anticipated Agreement Start Date	October 1, 2015
Agreement Termination Date	June 30, 2019



## Other Information

- **Updates on Solicitation Documents and today's presentation:**  
[www.energy.ca.gov/contracts/epic.html#GFO-15-303](http://www.energy.ca.gov/contracts/epic.html#GFO-15-303)  
[www.energy.ca.gov/contracts/pier.html#PON-14-507](http://www.energy.ca.gov/contracts/pier.html#PON-14-507)
- **Sign up for the Listserver by selecting "Opportunity":**  
[www.energy.ca.gov/listservers/](http://www.energy.ca.gov/listservers/)
- **Information on EPIC:**  
[www.energy.ca.gov/research/epic/index.html](http://www.energy.ca.gov/research/epic/index.html)
- **Information on other EPIC solicitations:**  
[www.energy.ca.gov/contracts/epic.html](http://www.energy.ca.gov/contracts/epic.html)
- **Information on Natural Gas RD&D:**  
<http://energy.ca.gov/contracts/pier.html>



# Questions and Answers

- Please send all solicitation-related questions in written form to:

Gordon Kashiwagi  
Commission Agreement Officer  
[gordon.kashiwagi@energy.ca.gov](mailto:gordon.kashiwagi@energy.ca.gov)

**Deadline to submit questions is  
5:00 PM PDT, April 8, 2015!**