



Pre-Application Workshop for EPIC Solicitation:

“Solar +: Taking the Next Steps to Enable Solar as a
Distribution Asset”

Energy Research and Development Division
California Energy Commission

December 7, 2016

Angie Gould



Agenda

Topic	12-7-2016
Welcome <ul style="list-style-type: none">• Housekeeping• Background• Solicitation Purpose, Goals, Funding• Eligible Applicants• Key Dates	10:00 a.m.
Project Groups	10:15 a.m.
Application requirements <ul style="list-style-type: none">• Screening• Scoring• Proposal Approval Process	10:30 a.m.
Questions and Answers on GFO-16-309	11:00 am
Adjourn & Networking	11:30 pm



Housekeeping

- In case of emergency
- Facilities
- Sign-in sheet
- Muting of WebEx during presentation
- Q&A protocol
- Updates on solicitation documents and today's presentation will be posted at:
<http://www.energy.ca.gov/contracts/epic.html#GFO-16-309>



Commitment to Diversity

The California Energy Commission adopted a formal resolution strengthening its commitment to diversity in its funding programs.

We encourage disadvantaged and underrepresented businesses and communities to engage in and benefit from our programs.

To meet this commitment, our 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.



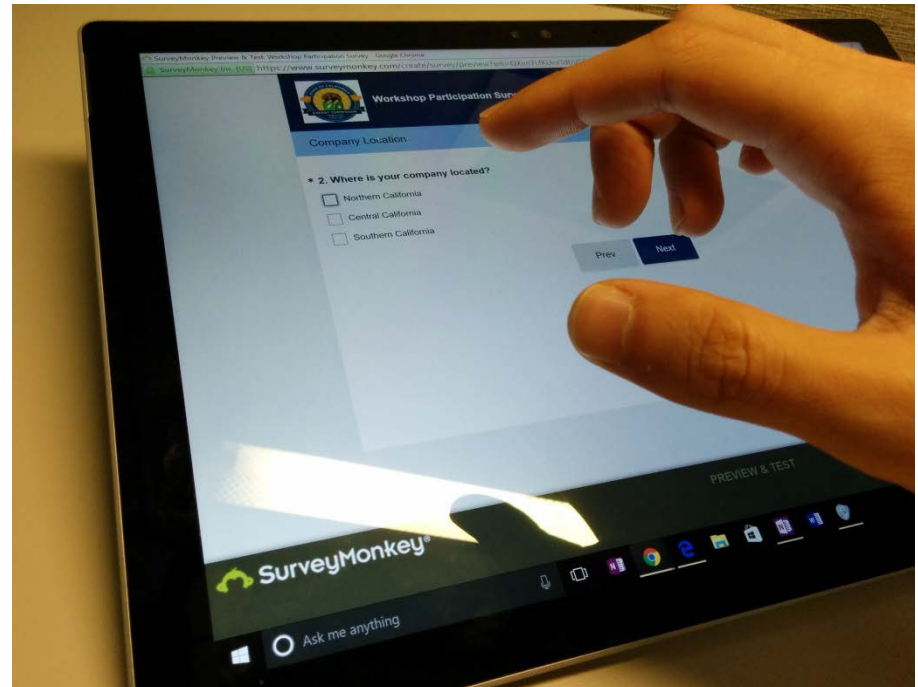
We Want to Hear From You!

1-Minute Survey

- The information supplied will be used for public reporting purposes to display anonymous overall attendance of diverse groups.

- iPads are being passed around the room
- Online SurveyMonkey for WebEx Participants:
https://www.surveymonkey.com/r/CEC_12-07-2016

Thanks for your time!





Connect With Us



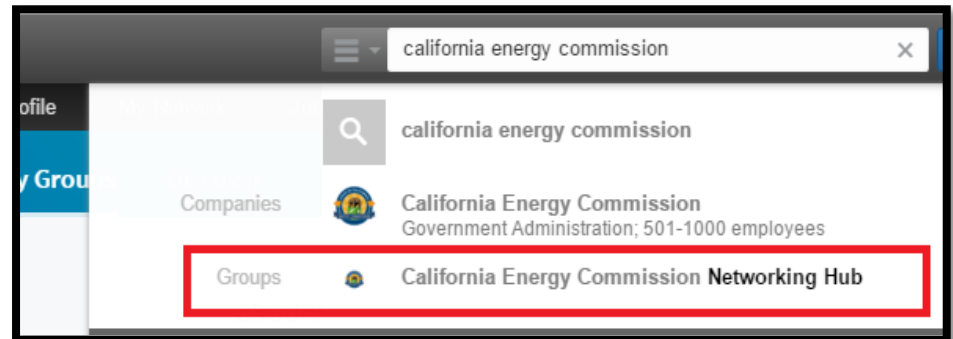


Find Partners via LinkedIn

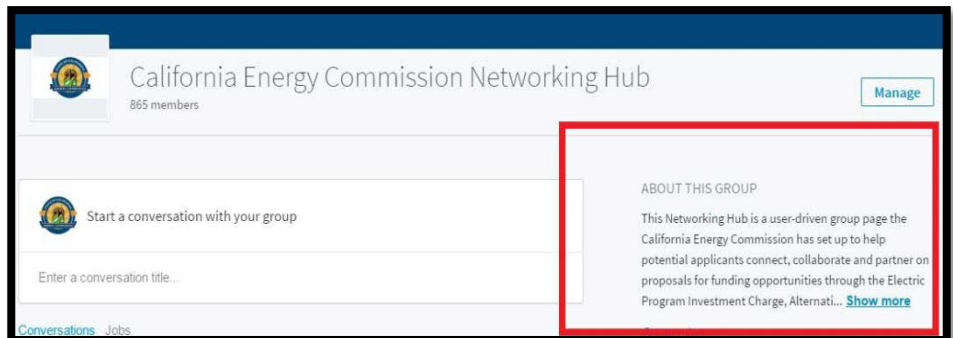
The Energy Commission created a user-driven LinkedIn group page to help potential applicants **connect, collaborate** and **partner** on proposals for funding opportunities.

Join the “California Energy Commission Networking Hub” using:

- The LinkedIn Search Box
- URL: bit.ly/CalEnergyNetwork



Then, use the ‘About this Group’ section on the LinkedIn group page to find funding opportunity specific subgroups.





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 the three largest electric investor-owned utilities, **Pacific Gas and Electric Co., San Diego Gas and Electric Co., and Southern California Edison.**
 - Fund clean energy technology projects that promote greater electricity reliability, lower costs, and increased safety.
 - Encourage technological advancement and breakthroughs to achieve state's statutory energy goals.
- Annual program funds total \$162 million with 80 percent administered by the California Energy Commission.

HIGHLIGHTING ENERGY INNOVATION

BY THE NUMBERS

DOLLARS AWARDED
\$167 MILLION

PROJECTS AWARDED
86

MATCH FUNDING
\$100 MILLION

<http://innovation.energy.ca.gov/SearchHome.aspx>



Demonstrating Energy Efficient Drying for Walnuts

This project will demonstrate a novel infrared technology for walnut drying at pilot and ...



Bringing A New Generation of LED Lighting Solutions to Market

The purpose of this agreement is to design and develop innovative light-emitting diode ...



City of Fremont Fire Stations Microgrid Demonstration

The project will design and build low carbon-based microgrids at three fire stations ...



Key Drivers

GHG Emissions Reductions:

- Assembly Bill (AB) 32 - The Global Warming Solutions Act of 2006
- SB 350 (Clean Energy and Pollution Reaction Act of 2015 (Statutes of 2015))
- Executive Order B-30-15

Distributed Resources Plans:

- AB 327 (Statutes of 2013)
- CPUC Order Instituting Rulemaking R. 14-08-013

Rule 21:

- CPUC Order Instituting Rulemaking R.11-09-011
- Smart Inverter Working Group



Solicitation Purpose

The purpose of this solicitation is to advance the deployment and grid integration of distributed solar resources through the use of:

- energy storage
- smart inverters
- advanced forecasting
- advanced modeling techniques



Available Funding

6 groups, up to **\$26 million** available for this solicitation.

Project Group	Total available funding	Max. award amount
Group 1: Pilot Demonstration of Advanced Solar + Storage Technologies for Community-Scale Applications	\$6,000,000	\$3,000,000
Group 2: Pilot Demonstration of Advanced Solar + Storage Technologies for Building-Scale Applications	\$3,500,000	\$1,500,000
Group 3: Enhanced Modeling Tools to Maximize Solar + Storage Benefits	\$1,000,000	\$1,000,000
Group 4: Advanced Smart Inverter Capabilities to Support High-Penetration Solar	\$6,000,000	\$3,000,000
Group 5: Holistic Forecasting to Support High-Penetration Solar Grid Operations	\$1,500,000	\$750,000
Group 6: Energy Storage Deployment to Facilitate Storage Interconnection and Enable Integration of High-Penetration Distributed Solar	\$8,000,000	\$2,000,000



Group 1: Pilot Demonstration of Advanced Solar + Storage Technologies for Community-Scale Applications

Funding amount: \$6,000,000

Purpose: To create a standardized solar + storage solution for communities to decrease soft costs and enhance the value of distributed PV to utility customers and the grid.

Proposed research must include:

- Development of advanced solar + storage technology, integrated at the solar array level, and targeted for applications at the community-scale.
- The pilot demonstration of developed technology at a strategic location on the distribution grid to enable community-scale solar + storage benefits to system owners and the distribution grid.
- Reduction in the total customer evening peak load of at least 15%.
- Evaluation of potential incentive changes, pricing schemes, and rate structures that may impact market deployment of community-scale solar + storage.
- **Additional requirements in GFO.**



Group 2: Pilot Demonstration of Advanced Solar + Storage Technologies for Building-Scale Applications

Funding amount: \$3,500,000

Purpose: To develop and evaluate advanced technologies that exploit the synergies between solar and stationary energy storage to enhance the value of behind-the-meter solar + storage to individual commercial and industrial building owners and tenants.

Proposed research must include:

- Development of advanced solar + storage technology, integrated at the module level for both the solar and the storage.
- The pilot demonstration of developed technology at a single commercial or industrial building situated at a strategic location on the distribution grid to maximize benefits to building owners and tenants while supporting the local grid.
- Smart building energy management strategies to smooth net load, reduce evening peak demand and maximize economic benefits while supporting local grid needs.
- **Additional requirements in GFO.**



Group 3: Enhanced Modeling Tools to Maximize Solar + Storage Benefits

Funding amount: \$1,000,000

Purpose: To develop modeling tools and strategies to help streamline the deployment of distributed solar, energy storage, and smart inverters and to maximize benefits to individual customers and the larger grid.

Proposed research must include:

- How the proposed activities will leverage and/or enhance Locational Net Benefit Analysis (LNBA) and Integrated Capacity Analysis (ICA) methodologies.
- Evaluation of how the marginal cost and value of systems change as a function of PV penetration and location on the feeder.
- Varying assumptions regarding participation in net energy metering, time of use rates, availability of investment tax credits, participation in reserve markets, and other relevant economic considerations.
- Analysis of compensation strategies for power and ancillary services that will incentivize systems that are of the greatest value to both the grid and the individual customers.
- **Additional requirements in GFO.**



Group 4: Advanced Smart Inverter Capabilities to Support High-Penetration Solar

Funding amount: \$ 6,000,000.00

Purpose: To verify Phase III recommendations as defined by the Smart Inverter Working Group, as well as other advanced communication functions. This project group is focused on pilot demonstrations of advanced smart inverter functions to decrease distributed PV integration costs, increase circuit hosting capacity, and/or enhance the value of distributed PV to consumers and the grid.

Proposed research must include:

- Bench-scale verification and pilot-scale demonstration of the SIWG Phase III functions.
- **Additional requirement details in GFO.**



Group 5: Holistic Forecasting to Support High-Penetration Solar Grid Operations

Funding amount: \$1,500,000

Purpose: To provide tools that the CAISO will integrate into its grid operations and its day-ahead and short-term planning efforts and to evaluate the specific economic benefits the tool will provide. Particular focus should be placed on improving DER energy production availability and on identifying and avoiding scenarios that would be the most costly for grid operators and ratepayers, such as extreme weather events.

Proposed research must include:

- Development of a time-dependent valuation metric for renewable energy forecast errors to determine associated costs of inaccuracies, particularly during peak demand times and ramp events.
- Establishing a baseline for both central station and DER forecasting for CAISO and California IOUs to use in evaluating proposed and future forecast improvements.
- Methodology to gather DER energy production data on timescales of 1 hour or less.
- **Additional requirements in GFO.**



Group 6: Energy Storage Deployment to Facilitate Storage Interconnection and Enable Integration of High-Penetration Distributed Solar

Funding amount: \$8,000,000

Purpose: To demonstrate energy storage technologies to enable and mitigate the impacts of high-penetration distributed photovoltaics and other DERs while streamlining storage interconnection and reducing integration costs on the distribution grid.

Proposed research must include:

- Coordination with the local electric utility.
- Locating all storage solutions in front of the meter on the distribution system.
- Use of a management system for efficient operation of the storage.
- Identification of the value provided by the deployed storage.
- **Additional requirements in GFO.**



Eligible Bidders

- This is an open solicitation for public and private entities, except for local publicly owned electricity utilities.
- Applicants **must** accept the EPIC terms and conditions.

<http://www.energy.ca.gov/research/contractors.html>

- Applicants are required to register with the California Secretary of State at <http://www.sos.ca.gov> and be in good standing to enter into an agreement with the Energy Commission.
- Applicants must propose a team that has demonstrated the ability to successfully complete similar research or demonstration projects.



Key Dates

Activity	Action Date
Solicitation Release	11/22/2016
Pre-Application Workshop Sacramento	12/7/2016 10:00 AM
DEADLINE FOR WRITTEN QUESTIONS	12/9/2016 5:00 PM
Anticipated Distribution of Questions and Answers	Week of 1/2/2017
DEADLINE TO SUBMIT APPLICATIONS	1/20/2017 5:00 PM
Anticipated Notice of Proposed Award Posting Date	March 2017
Anticipated Energy Commission Business Meeting Date	June 2017
Anticipated Agreement Start Date	August 2017
Anticipated Agreement End Date	3/31/2020



GFO Application Requirements (for *Electronic Submission*)

- **Preferred method** of Delivery is the Energy Commission Grant Solicitation System, available at <https://gss.energy.ca.gov/>.
- First-time users must register as a new user to access system. Passwords require letters and numbers.
- Log into the system early to solve technical issues in advance of the deadline.
- Electronic files **must** be in MS Word (.doc or .docx) and MS Excel formats. Keep file names short. Files with long names cannot be loaded into the system.
- Only hit “I Agree & Submit” **after** all application files are uploaded into the system. Once you hit “I Agree & Submit,” you cannot edit or add more files.
- Letters of support and commitment as well as attachments requiring **signatures must** be scanned and submitted in **PDF format**.
- The system will not allow applications to be submitted after the due date and time.
- More detailed information can be found on the pages 33-34 of the solicitation manual.



Live Demo Tutorial *(for Electronic Submission)*



GSS How to Apply Video.mp4



GFO Application Requirements *(for Hard Copy Submittal)*

- Submit Applications with **all attachments** in the order specified in Section III of the manual by the due date and time listed in Section I of the manual.
- Application documents should meet formatting requirements, page limits, and number of copies specified in the table on page 33 of the solicitation manual:
 - **One** hard copy (**with signatures**) and **one** electronic copy (on a CD-ROM or USB memory stick)



Application Requirements (continued)

Applicants must complete and include **twelve attachments**:

Att. 1. Application Form (**signature!**)

Att. 7. Budget Forms

Att. 2. Executive Summary Form

Att. 8. CEQA Compliance Form

Att. 3. Fact Sheet Template

Att. 9. References and Work Product Form

Att. 4. Project Narrative Form

Att. 10. Contact List

Att. 5. Project Team Form

Att. 11. Commitment and Support Letters (**signature!**)

Att. 6 & 6a. Scope of Work Form



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 (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
- *Suggested limit: two pages.*



Fact Sheet (Attachment 3)

- Must present project information in a manner suitable for publication.
- The fact sheet must follow the template provided and include:
 - A summary of project specifics
 - A description of the issue addressed by the project
 - A project description
 - Anticipated benefits for the State of California
- *Suggested limit: two pages*



Project Narrative (Attachment 4)

- Project Narrative includes the **majority** of the responses to the Scoring Criteria (Part IV manual)
- Provide a detailed description of the proposed project 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 IOU 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 (required for Group 6 applicants)
- Provide sufficient detail so that reviewers will be able to evaluate the proposal against each of the scoring criteria.
- *Suggested limit: 20 pages*



Project Team Form (Attachment 5)

- Must identify by name all key personnel assigned to the project:
 - Project Manager
 - Principal Investigator (if applicable)
 - Subcontractor receiving at least 25% of Energy Commission funds or \$100,000, whichever is less
- Clearly describe their individual areas of responsibility.
- Include a resume



Scope of Work (Attachments 6, 6a)

- The Scope of Work identifies the **Tasks** required to complete the project.
 - Task 1: General Project Tasks are mandatory and cannot be revised.
 - Task 2: Project Preparation Task is mandatory **for Groups 1, 2, 4, and 6 only**.
 - Task 3: Technical Tasks should be very specific and help scorers to identify what you will deliver to the Energy Commission. Products can be documents, plans and reports.
 - “Products” are not equipment and other items that cannot be delivered and stored at the Energy Commission.
- Project Schedule should provide information about meetings, products and their due dates.
 - All work must be scheduled for completion by March 31, 2020.
 - Product titles 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:

- Category Budget
- Direct Labor (Prime Labor Rates)
- Fringe Benefits
- Travel
- Equipment
- Materials and Misc.
- Subcontracts
- Indirect Costs and Profit

The Applicant must submit information on all budget worksheets, and in the format required.

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



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

- The Energy Commission requires this information to facilitate its environmental evaluation of the proposed project under CEQA.
- The form will also help applicants to determine CEQA compliance obligations by identifying which funded activities may be exempt from CEQA and which activities may require additional environmental review.
- 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 (Attachment 9)

- This form contains two sections:
- Section 1: References
 - Provide applicant and subcontractor references as instructed.
- 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 publications in scientific or technical journals (if applicable).



Contact List (Attachment 10)

- Identifies the names and contact information of the project manager, administrator, accounting officer, and recipient of legal notices.
- 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)

- A **Commitment Letter** commits an entity or individual to providing the service or funding described in the letter.
- A **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.
- **At least one** support letter from a project stakeholder must be included.



Application Evaluation

To evaluate applications, the Energy Commission will organize an Evaluation Committee that consists primarily of Energy Commission staff.

Application will be evaluated in two stages:

- Stage 1 – Application Screening (Section E, page 43)
- Stage 2 – Application Scoring (Section F, page 45)



→ Stage 1 Application Screening (Administrative)

Application Administrative Screening Process

1. Energy Commission staff screens applications per criteria in the solicitation (page 43).
2. Criteria is evaluated on a pass/fail basis.
 - ✓ Applicants must pass all screening criteria or the application will be disqualified.

Some Reasons for Disqualification

- ✓ Application not submitted by the specified due date and time.
- ✓ No signature on the Application Form.
- ✓ Applicant did not address one of the eligible project groups.
- ✓ Requested funding is outside of the specified minimum/maximum range.
- ✓ Application does not include at least one support letter.
- ✓ Application contains confidential material.



→ Stage 2 Technical Scoring

- Evaluation Committee applies the **scoring scale** to the scoring criteria.
- Applications must obtain a **minimum passing score of 70.00 points**. In addition, the application must receive a minimum score of **49.00 points** for criteria **1–4** to be eligible for funding.
- Passing applications will be considered for preference points.
- **Additional points** (up to **10** for Groups 3-6 and up to **15** for Groups 1-2) may be awarded for match funding (all groups) and benefitting disadvantaged communities (Groups 1-2).

Scoring Criteria (pages 45-51)	Maximum Points
1. Technical Merit and Need	20
2. Technical Approach	20
3. Impacts and Benefits for CA IOU Ratepayers	20
4. Team Qualifications, Capabilities and Resources	10
5. Budget Cost-Effectiveness	10
6. EPIC Funds Spent in CA	15
7. Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	5
Total	100
Minimum points to pass	70



Technical Scoring Scale

% Possible Points	Interpretation	Explanation for Percentage Points
0%	Not Responsive	Response does not include or fails to address the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
10-30%	Minimally Responsive	Response minimally addresses the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
40-60%	Inadequate	Response addresses the requirements being scored, but there are one or more omissions, flaws, or defects or the requirements are addressed in such a limited way that it results in a low degree of confidence in the proposed solution.
70%	Adequate	Response adequately addresses the requirements being scored. Any omission(s), flaw(s), or defect(s) are inconsequential and acceptable.
80%	Good	Response fully addresses the requirements being scored with a good degree of confidence in the Applicant's response or proposed solution. No identified omission(s), flaw(s), or defect(s). Any identified weaknesses are minimal, inconsequential, and acceptable.
90%	Excellent	Response fully addresses the requirements being scored with a high degree of confidence in the Applicant's response or proposed solution. Applicant offers one or more enhancing features, methods or approaches exceeding basic expectations.
100%	Exceptional	All requirements are addressed with the highest degree of confidence in the Applicant's response or proposed solution. The response exceeds the requirements in providing multiple enhancing features, a creative approach, or an exceptional solution.



How to achieve a high score?

Scoring Criteria	The Question to Answer
Technical Merit and Need	Why should your project be funded?
Technical Approach	How you're going to do what you're going to do?
Impacts and Benefits for CA IOU Ratepayers	How will your project benefit ratepayers?
Team Qualifications, Capabilities and Resources	Who is going to make this project happen, and what resources are available to make it happen?
Budget Cost-Effectiveness	Are you spending money wisely?
EPIC Funds Spent in CA	This is a direct calculation based on budget forms.
Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	This is a direct calculation based on budget forms.



Ranking, Notice of Proposed Award, Agreement Development

Applications that receive a minimum score of 70.00 points for all criteria will be ranked according to their score.

- The Energy Commission will post a **Notice of Proposed Award (NOPA)** that includes: (1) the total proposed funding amount; (2) the rank order of applicants; and (3) the amount of each proposed award. The Energy Commission will post the NOPA at its headquarters in Sacramento and on its website, and will mail it to all parties that submitted an application.
- Proposed awards **must** be approved by the Energy Commission at an Energy Commission Business Meeting.
- Applications recommended for funding will be developed into a grant agreement to be considered at an Energy Commission Business Meeting.
- Recipients may begin the project only **after full execution** of the grant agreement (approval at an Energy Commission business meeting and signature by the Recipient and the Energy Commission).



Ranking, Notice of Proposed Award, Agreement Development

Debriefings: Unsuccessful applicants may request a debriefing after the release of the NOPA by contacting the Commission Agreement Officer listed in Part I. A request for debriefing must be received **no later than 30 calendar days** after the NOPA is released.

The Energy Commission reserves the right to:

- Allocate any additional funds to passing applications, in rank order.
- Negotiate with successful applicants to modify the project scope, schedule, and/or level of funding.



Grounds for Rejection

Applications that do not pass the screening stage will be rejected. In addition, the Energy Commission reserves the right to reject an application and/or to cancel an award if the any of the circumstances listed on pages 41-42 are discovered at any time during the application or agreement process.

- Example: The application contains false or intentionally misleading statements or references that do not support an attribute or condition contended by the applicant.



Questions and Answers

Please send all questions related to GFO-16-309 to:

Janna Franks

Commission Agreement Officer

1516 Ninth Street, MS-18

Sacramento, CA 95814

Telephone: (916) 654-4921

Fax: (916) 654-4423

janna.franks@energy.ca.gov

Deadline to submit questions:

Friday, December 9, 2016 5:00 PM PDT



Thank you!