



CALIFORNIA ENERGY COMMISSION

Pre-Application Workshop

Improving Performance and Cost Effectiveness of Wind Energy Technologies

(EPIC Wind Energy Research Solicitation)

GFO-16-310

Energy Research and Development Division
California Energy Commission

April 13, 2017



Agenda

Time	Topic
10:00 a.m.	<ul style="list-style-type: none">• Welcome and introductions• Housekeeping• Commitment to diversity• Background• Solicitation purpose, goals, project requirements and funding• Eligible applicants• Key dates• Application requirements, support/commitment letters, and match funding• Proposal evaluation and selection process
11:00 a.m.	Questions and Answers
12:00 p.m.	Meeting Adjourn



Housekeeping

- In case of emergency
- Facilities
- Sign-in sheet
- Diversity Survey
 - Slide/Online Participant Link:
 - <https://www.surveymonkey.com/r/CEC-06-28-2016>
- Updates on solicitation documents and today's presentation will be posted:

Improving Performance and Cost Effectiveness of Wind Energy Technologies

<http://www.energy.ca.gov/contracts/GFO-16-310/>



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.



Connect With Us





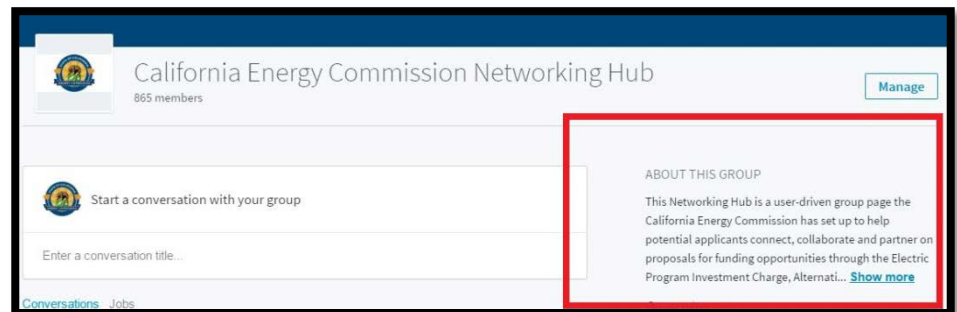
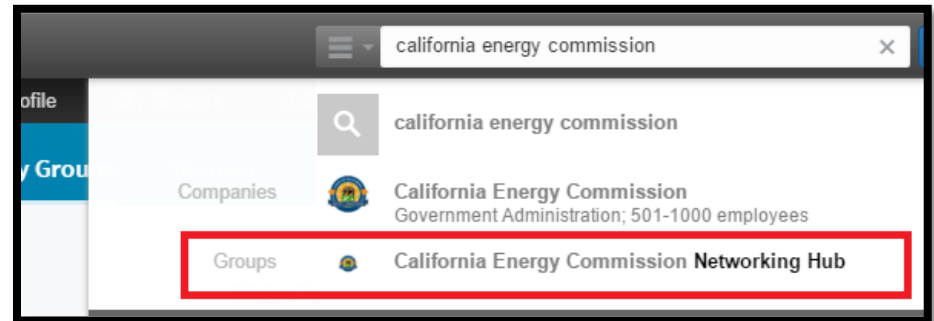
Find Partners via LinkedIn

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 or click on <https://www.linkedin.com/groups/6925861>

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.
 - Annual program funds total \$162 million per year with 80 percent administered by the California Energy Commission.
- 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.



Background

Part of 2015-2017 EPIC Investment Plan

Program Area: Applied Research and Development

Strategic Objective S4: Improve Power Plant Performance, Reduce Cost, and Accelerate Market Acceptance of Existing and Emerging Utility-Scale Renewable Energy Generation.

Funding Initiative S.4.4: Upgrade California's Aging Wind Turbines: Design, Cost, and Development Improvements That Meet Local Needs.



Background

Policy Drivers

- Assembly Bill (AB) 32 (The Global Warming Solutions Act of 2006)
- Renewables Portfolio Standard (Senate Bill (SB) X1-2)
- SB 350 (Clean Energy and Pollution Reduction Act of 2015 (Statutes of 2015))
- Governor's Clean Energy Jobs Plan (2011)
- Executive Order B-30-15 (Greenhouse gas emission reduction target)
- Integrated Energy Policy Report (Biennial)



Solicitation Purpose and Project Focus

- Develop technologies, tools, and strategies that reduce technological and economic barriers to upgrading, repowering, and expanding wind power generation and contribution to the in-state electricity mix.
- Reduce the cost and improve reliability wind power systems
- Develop technological solution that can be applicable and may be duplicated in different California regions.
- Promote the installation of modern wind projects
- Develop modern small turbines for distributed generation
- Advance strategies and tools needed in support of wind energy generation
- Increase economic competitiveness of renewable generation and cost-effectiveness of investments.



Example Projects*

- R&D on innovative components that can be applied across wind turbine models and manufactures – lower O&M costs, and extend a wind generation facility’s economic life.
- R&D on new wind system materials and infrastructure that improve durability and extend the lifetime of wind energy systems.
- Pilot-scale demonstration or field demonstration of a more efficient wind turbines.
- Redesign and re-engineering or field demonstration of new wind turbine models
- R&D on enabling wind generation facilities to ramp up and down quickly while reducing the associated costs and that will offer various grid support.

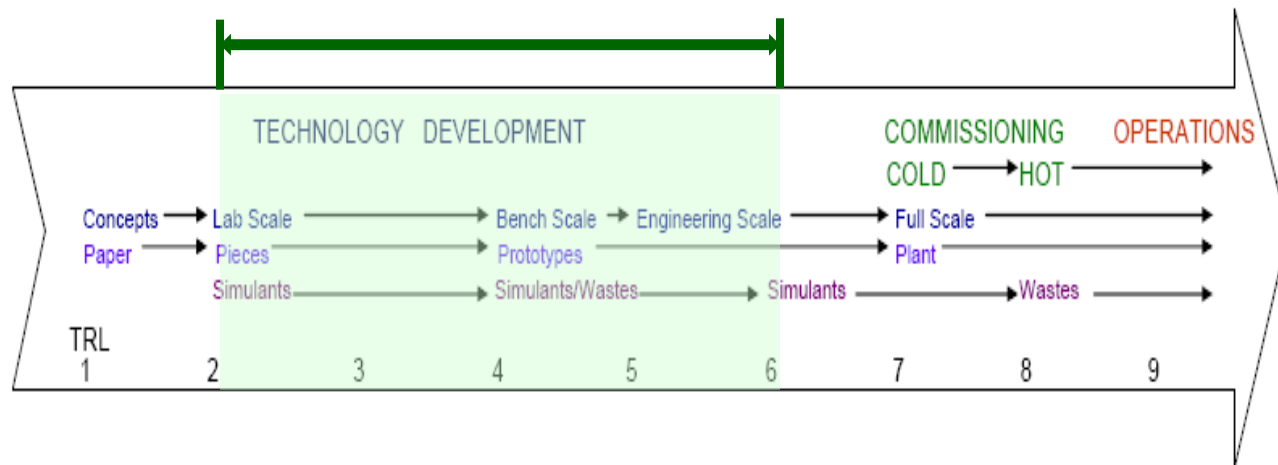
*Additional examples in page 15 (Section II.B.2) of the application manual.



Project Requirements

- Applied research and development (AR&D): early stage research, bench-scale testing, and pilot-scale testing activities that are necessary to demonstrate the feasibility of pre-commercial technologies.

Technology Readiness Level (TRL)*



Pilot Test/Demonstration: projects at the **TRL6** level; typically smaller than anticipated full scale commercial unit; provide proof of concept; test the design and validity of an approach.

* *Technology Readiness Assessment Guide*. Department of Energy
<http://www2.lbl.gov/dir/assets/docs/TRL%20guide.pdf>



Project Requirements

- ❖ Applications must clearly explain the status of the proposed project and discuss the technology readiness level of the proposed project. Energy Commission will review the explanation and make its own determination in screening and scoring of applications.
- ❖ All pilot testing/demonstration activities must be located within California's electricity Investor-owned Utilities (IOU) service territory.
- ❖ Projects that are not at a pilot demonstration level but are requiring installation of equipment and testing beyond the laboratory must also be located within the electricity IOU service territory.
- ❖ Wind technologies, strategies, and tools are focused on California's specific needs.



Project Requirements

Ratepayer Benefits, Technological Advancements, and Breakthroughs (Section II.B.3)

- CPUC requires EPIC-funded projects to:
 - ✓ Benefit electricity ratepayers; and
 - ✓ Lead to technological advancement and breakthroughs to overcome the barriers that prevent the achievement of the state's statutory energy goals.
- CPUC defines “ratepayer benefits” as greater reliability, lower costs, and increased safety



Available Funding

Up to **\$2.5 million** available for this solicitation.

Item	Amount Available	Minimum and Maximum Award Amount
Improving Performance and Cost-Effectiveness of Wind Energy Technologies	\$2.5 million	\$500,000 – \$1.25 million

Match funding is not required for this Solicitation.

Applications that include match funding will receive additional points during the scoring phase



Eligible Bidders

- This is an open solicitation for public and private entities, except for publicly owned utilities.
- Applicants must accept the EPIC terms and conditions.
 - Standard T&Cs: <http://www.energy.ca.gov/research/contractors.html>
- Applicants are required to register with the California Secretary of State and be in good standing to enter into an agreement with the Energy Commission. <http://www.sos.ca.gov>
- Applicants must propose a team with proven ability to successfully complete similar projects.



Key Dates

Activity	Action Date
✓ Solicitation Release	April 6, 2017
✓ Pre-Application Workshop Sacramento	April 13, 2017
<u>DEADLINE FOR WRITTEN QUESTIONS</u>	<u>April 18, 2017 5:00 pm</u>
Anticipated Distribution of Questions and Answers	Week of May 1, 2017
<u>DEADLINE TO SUBMIT APPLICATIONS</u>	<u>June 20, 2017 5:00 pm</u>
Anticipated Notice of Proposed Award (NOPA) Posting Date	August, 2017
Anticipated Energy Commission Business Meeting Date	October 11, 2017
Anticipated Agreement Start Date	November 15, 2017
Anticipated Agreement End Date	December 31, 2021



GFO Application Requirements

(for Electronic Submittal)

- Preferred method of Delivery is the Energy Commission Grant Solicitation System, available at: <https://gss.energy.ca.gov/>.
 - Electronic files must be in Microsoft Word XP (.doc format) and Excel Office Suite formats, unless originally provided in solicitation in another format.
- Attachments requiring signatures may be scanned and submitted in PDF format.
- Completed Budget Forms (Attachment 7) must be in Excel format.
- First-time users must register as a new user to access the system.
- The system will not allow applications to be submitted after the due date and time (**June 20, 2017 at 5:00 p.m. PDT**).



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 – part F of the manual.
- Application documents should meet formatting requirements, page limits, and number of copies specified in Section III - part A: APPLICATION FORMAT, PAGE LIMITS, AND NUMBER OF COPIES.
 - **Five** hard copies with signatures and **one** electronic copy.



Application Requirements

Each 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 and Support Letters
6. Scope of Work	

Be consistent in your application!



Project Narrative

- This is your opportunity to tie everything together and explain the entirety of the project
- Include detailed description of the proposed project according to the Application Scoring Criteria – Section IV, part F.
- The narrative should explain:
 - Why your project is important?
 - What you will be doing in your project?
 - How are you going to complete the project?
 - How will ratepayers benefit?
 - What it is going to cost ratepayers, and is it worth it?

Provide enough detail so that reviewers will be able to evaluate the proposal against each of the scoring criteria



Scope of Work (Attachment 6)

- Tell us exactly what you are proposing to do in your project.
- Identify what you will deliver to the Energy Commission.
- Scope of Work must be consistent with the project narrative.
- Follow the Attachment 6 template format
- Be sure to include Project Schedule (Attachment 6a)



Budget (Attachment 7)

Identify how you will be spending EPIC funding and match funds to complete this project.

- Each Applicant and major subcontractor must complete the budget document in Excel, including all budget forms.
- This must be submitted in the same format as it is provided.
- Do not delete sheets or rows, use the hide/expand functions.
 - Shaded cells are automatically filled or calculated.



Match Funding

- Match funding **is not** required for this solicitation. Applications that include match funding will receive additional points during the scoring phase
- Applicants may receive up to 10 additional points based on the criteria below:
 - Up to 5 points for this criterion will be awarded based on the percentage of match funds relative to the EPIC funds requested. This ratio will be multiplied by 5 to yield the points, and rounded to the nearest whole number.
 - The remaining 5 points will be based on the level of commitment, type of match funding, dollar value justification, and funding replacement strategy described in the match funding commitment letter. See pages 31-32 for application scoring scale
- Match funding contributors must submit match funding commitment letters that meets the requirements of Attachment 11. Failure to do so will disqualify the match funding commitment from consideration.



Commitment and Support Letter Form (Attachment 11)

- This form provides guidelines for letters of support or commitment that are submitted with the application.
 - Commitment letter commits an entity or individual to providing the service or funding described.
 - Support letter details an entity's or individual's support for the project.
- Support letters are required for all projects.
- Match funding for each Application must be supported by a match fund commitment letter.
- Projects that involves testing/demonstration/deployment must submit a commitment letter from the testing/demonstration/deployment site.
- Any project partners that will make contributions other than match funding or a test, demonstration, or deployment site to the project must submit a commitment letter.
- Limited to two pages per letter, excluding the cover page.



How will my Application be Evaluated?

→ Administrative Screening

Application Admin Screening Process

1. Energy Commission staff screens applications per criteria in the solicitation (page 27).
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.
- ✓ Applicant did not address one of the eligible project groups.
- ✓ Requested funding is outside of the specified minimum/maximum range.
- ✓ Project completion date beyond the specified agreement end date.
- ✓ Application does not include one or more support letters.
- ✓ Application contains confidential material.



How will my Application be Evaluated?

- Evaluation Committee applies the scoring scale to the scoring criteria.
- Applications must obtain a minimum passing score of 70% for criteria 1-4 (or 49 points) in order to continue evaluation, and must also obtain a minimum passing score of 70% overall for criteria 1-7 (or 70 points), in order for an Application to be considered for funding. Passing applications will be considered for match funding preference and disadvantaged community points¹.
- Each Applicant must review the Evaluation and Award Process section of the solicitation and ensure that the application provides a clear and complete response to each scoring criteria in the project narrative.

Scoring Criteria (pages 30-34)	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
Subtotal	70
Minimum points to pass (Criteria 1-4)	49
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 (criteria 1-7)	70

¹<http://oehha.maps.arcgis.com/apps/Viewer/index.html?appid=dae2fb1e42674c12a04a2b302a080598>



Additional Points Applications must meet both minimum passing scores (Scoring Criteria 1-4 and 1-7) to be eligible for the additional points.

<p>8. Match Funding</p> <ul style="list-style-type: none">● Points for this criterion will be awarded as follows:○ 5 points will be awarded based on the percentage of match funds relative to the EPIC funds requested. This ratio will be multiplied by 5 to yield the points.○ 5 points will be awarded based on the level of commitment and will consider type of match funding, justification, and funding replacement strategy. The proposal scoring scale in Section F will be used to rate these criteria.	10
<p>9. Disadvantaged Communities</p> <p>Projects with all test or demonstration sites located in disadvantaged communities must justify how the project will benefit the disadvantaged community in order to receive additional points.</p> <p>A disadvantaged community is identified by census tract and represents the 25% highest scoring tracts in CalEnviroScreen 2.0 or later versions.</p>	5



What is the Technical Scoring Scale?

% of 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.



What is Important?

Scoring Criteria (pages 30-34)	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.



Scoring Criteria	Maximum Points
<p>1. Technical Merit and Need</p> <ul style="list-style-type: none">a. Goals, objectives, technological or scientific knowledge advancement, and innovation in the proposed project.b. Technological advancement and breakthroughs that overcome California-specific barriers to achieving the State’s statutory energy goals.c. 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.d. Need for EPIC funding... and how the proposed work fits into California-specific renewable energy needs and market environment.e. Technically feasible and achievable within the proposed project schedulef. Clear and plausible measurement and verification plang. Progress towards achieving compliance with (CEQA)h. Benefit to disadvantaged communities, if applicable.	<p>20</p>



3. Impacts and Benefits for California IOU Ratepayers

20

- a. Benefit California IOU ratepayers with respect to the EPIC goals of greater reliability, lower costs, and/or increased safety).
- b. Clear, plausible, and justifiable **quantitative** estimates of potential benefits for California IOU electricity ratepayers
- c. Describes the applicability of proposed work and/or technology to California's wind resources and associated challenges and barriers.**
- d. Timeframe, assumptions, and calculations and explains their reasonableness.
- e. Impacted market segments in California.
- f. **Qualitative** or intangible benefits to California IOU electricity ratepayers.
- g. Cost-benefit analysis that compares project costs to anticipated benefits.
- h. Technology readiness level and the status of the proposed project whether it involves pilot testing/demonstration or an earlier stage of research that involves equipment installation and testing beyond the laboratory, and confirms, for both cases, that the project location is within the IOU territory.**



Other Information

- **Solicitation documents and today's presentation:**
<http://www.energy.ca.gov/contracts/GFO-16-310/>
- **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



Questions and Answers

Please send all questions related to GFO-16-310 to:

Gordon Kashiwagi

Commission Agreement Officer

1516 Ninth Street, MS-18

Sacramento, CA 95814

(916) 654-5131

(916) 654-4423 (fax)

gordon.kashiwagi@energy.ca.gov

Deadline to submit questions:

Tuesday, April 18, 2017 5:00 PM PDT



Questions and Answers





Activity	Action Date
<u>DEADLINE FOR WRITTEN QUESTIONS</u>	<u>April 18, 2017 5:00 pm</u>
Anticipated Distribution of Questions and Answers	Week of May 1, 2017
<u>DEADLINE TO SUBMIT APPLICATIONS</u>	<u>June 20, 2017 5:00 pm</u>
Anticipated Notice of Proposed Award (NOPA) Posting Date	August, 2017

Contact: **Gordon Kashiwagi**
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(916) 654-5131
(916) 654-4423 (fax)
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Thank you!