<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am</td>
<td>Welcome and Introduction</td>
<td>David</td>
</tr>
<tr>
<td>9:05 am</td>
<td>Solicitation Background</td>
<td>David</td>
</tr>
<tr>
<td></td>
<td>• Natural Gas Research Program</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Purpose of Solicitation</td>
<td></td>
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<tr>
<td></td>
<td>• Available Funding</td>
<td></td>
</tr>
<tr>
<td>9:20 am</td>
<td>Application Requirements</td>
<td>Yahui</td>
</tr>
<tr>
<td></td>
<td>• Project Group Requirements</td>
<td></td>
</tr>
<tr>
<td>09:40 am</td>
<td>Application Requirements</td>
<td>Reta</td>
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<td></td>
<td>• Attachments</td>
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<td></td>
<td>• Submission Process</td>
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<tr>
<td>10:00 am</td>
<td>Q&amp;As</td>
<td></td>
</tr>
<tr>
<td>11:00 pm</td>
<td>Adjourn</td>
<td></td>
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</tbody>
</table>
In case of emergency
Facilities
Sign-in sheet
WebEx participants
Updates on solicitation documents including this presentation will be posted at the Grant Funding Opportunity’s webpage: https://www.energy.ca.gov/contracts/pier.html#GFO-18-502
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.
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.

- WebEx participants, please use this link: https://www.surveymonkey.com/r/CEC-10-11-2017
- iPads are being passed around the room

Thanks!
Connecting With Us

Twitter

CA Energy Commission

LinkedIn

Instagram

California Energy Commission

calenergy
Find Partners via LinkedIn

The Energy Commission has created a user-driven LinkedIn group page to help potential applicants connect, collaborate, and partner on proposals for research funding opportunities. Participants may subscribe to the “California Energy Commission Networking Hub” by clicking on this link https://www.linkedin.com/groups/6925861/profile or searching LinkedIn.

By subscribing you can connect with new colleagues and peers.
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 2004.

The purpose of the Natural Gas RD&D Program is to benefit the ratepayers of natural gas investor-owned utilities.

The Natural Gas RD&D Program funds clean energy technology projects that promote greater natural gas reliability, lower costs, and increased safety:

- Energy Efficiency
- Renewable Energy and Advance Generation
- Energy Infrastructure
- Natural Gas-Related Transportation

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.

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

- **SB 887 Natural Gas Storage Wells**
  - Requires Regulation of Gas Storage Wells

- **Executive Order B-30-15**
  - GHG Emissions Reduction Targets

- **Governor Brown Aliso Canyon Gas Leak Proclamation**
  - Strengthens Oversight of Gas Storage Facilities

- **CPUC’s Natural Gas Safety Action Plan**
  - Guides and Promotes Rules for Utilities Based on Risk Assessment and Risk Management
Purpose of Solicitation

Fund Energy Infrastructure Research Projects Aimed at:

- Seismic Risk Assessment of Natural Gas Storage and Pipeline Infrastructure
- Enhanced Training and Tools for Conducting Pipeline Inspections
## Available Funding

<table>
<thead>
<tr>
<th>Project Group</th>
<th>Available Funding</th>
<th>Minimum Award Amount</th>
<th>Maximum Award Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1: Seismic Risk Assessment of Natural Gas Storage and Pipeline Infrastructure</strong></td>
<td>$5,000,000</td>
<td>$1,000,000</td>
<td>$5,000,000</td>
</tr>
<tr>
<td><strong>Group 2: Enhanced Training and Tools for Conducting Pipeline Inspections</strong></td>
<td>$1,700,000</td>
<td>$1,000,000</td>
<td>$1,700,000</td>
</tr>
</tbody>
</table>
Match Funding

- Match funding is optional.
- Applications that include match funding will receive additional points during the scoring phase.
- Match funding contributors must submit match funding commitment letters that meet the requirements of Attachment 11. Failure to do so will disqualify the match funding commitment from consideration.
- Refer to Section I.F.2 in the Solicitation Manual for more details on match funding.
Group 1: Seismic Risk Assessment of Natural Gas Storage and Pipeline Infrastructure

Funding Amount: $5,000,000

Background:

- Seismic events can result in significant damage and disruption.
- Little research has been conducted on seismic risks to underground storage and little research covers certain risks to above ground infrastructure, such as from landslides.
- Detailed analysis remains time-consuming and costly.
- New methods are needed to assess seismic impacts, conduct system vulnerability reviews, and improve the overall safety and integrity of natural gas infrastructure.
Group 1: Seismic Risk Assessment of Natural Gas Storage and Pipeline Infrastructure

Requirements:

- Develop a risk assessment model taking into account:
  - nature and origin of earthquakes
  - seismic ground motion
  - fault rupture and displacement
  - soil-structure interactions
  - current seismic risks
  - existing approaches to seismic risk vulnerabilities
  - regulatory requirements
Group 1: Seismic Risk Assessment of Natural Gas Storage and Pipeline Infrastructure

Requirements (cont.):

- Identify and assess seismic hazards, seismic design models, and mitigative or preventive measures with associated costs.
- Integrate current seismic datasets and design the model to be able to integrate future datasets.
- Validate the model on one or more specific pipeline(s) AND one or more storage facilities in California.
- Create a packaged, open-source application that can be operated from a desktop computer.
- Coordinate with end users including, Investor Owned Utilities (IOUs), CPUC, and DOGGR, to ensure application deployment.
Group 1: Seismic Risk Assessment of Natural Gas Storage and Pipeline Infrastructure

Examples for maximizing benefits to strengthen proposal:

- Demonstrate depth of expertise in seismic risk assessment and natural gas infrastructure.
- Address seismic impacts to both aboveground and underground infrastructure.
- Validate the models using historical data recorded for specific facilities.
- Partner with user groups to accommodate customized requirements and address how the product can be used by end users.
- Demonstrate ability to prioritize mitigation options and improve infrastructure resistance to seismic impacts.
Group 2: Enhanced Training and Tools for Conducting Pipeline Inspections

**Funding Amount:** $1,700,000

**Background:**

- Pipeline and Hazardous Materials Safety Administration (PHMSA) provides required inspector training.
- Inspectors could benefit from more experiential, virtual, or in-field training activities.
- Training technology has advanced significantly with new capabilities that include high definition visualization, advanced pipeline infrastructure simulation, and tools to integrate existing and new technologies for field use.
Group 2: Enhanced Training and Tools for Conducting Pipeline Inspections

Requirements:

Develop enhanced training and tools that integrate technologies to improve inspection capabilities beyond those provided by PHMSA.

- Tools should help efficiently trace facility features, make important decisions in real time, and enhance the capacity and productivity of facility inspections.

- Tools should be able to combine data from past and current inspections, incident investigations, pipeline attributes, and leak data to target inspections to areas of highest risks.

- Data gathered remotely (drones, wireless sensors, etc.) should be integrated to enable inspectors to make important decisions.
Group 2: Enhanced Training and Tools for Conducting Pipeline Inspections

Requirements (cont.):

- The tools should be able to perform field verification of recently repaired leaks to ensure operator compliance.
- The tools should be tested through collaboration with CPUC inspectors, and the performance should be characterized.
- The final product should include an open-source application product that can be used on a desktop computer or tablet.
Group 2: Enhanced Training and Tools for Conducting Pipeline Inspections

Examples for maximizing benefits to strengthen proposal:

- Demonstrate success in providing experiential training approaches.
- Demonstrate ability to improve inspection efficiency and extend inspection and emergency response capacity.
- Describe how to engage CPUC inspectors and engineers for feedback and pilot tests.
- Integrate, display and analyze data from multiple sources to improve decision making.
- Leverage existing proven technologies and take advantage of new approaches or technologies.
Eligible Applicants

► This is an open solicitation for all public and private entities.

► 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 accept the PIER terms and conditions.
  ► Standard, UC, and DOE Terms & Conditions available online: http://www.energy.ca.gov/research/contractors.html

► Applicants must propose a team with proven ability to successfully complete similar projects.
## Application Requirements

Each Applicant must complete and including the following:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Application Form (.pdf)</td>
<td>7. Budget(s) (.xlsx)</td>
</tr>
<tr>
<td>2. Executive Summary (.docx)</td>
<td>8. CEQA Compliance Form (.docx)</td>
</tr>
<tr>
<td>3. Fact Sheet (.docx)</td>
<td>9. References and Work Product Form (.docx, .pdf)</td>
</tr>
<tr>
<td>4. Project Narrative (.docx)</td>
<td>10. Contact List (.docx)</td>
</tr>
<tr>
<td>5. Project Team (.docx, .pdf)</td>
<td>11. Commitment and Support Letters (.pdf)</td>
</tr>
<tr>
<td>6. Scope of Work (.docx)</td>
<td>12. California Based Entity Form (.docx)</td>
</tr>
<tr>
<td>6a. Project Schedule (.xlsx)</td>
<td></td>
</tr>
</tbody>
</table>
Project Narrative (Attachment 4)

This is your opportunity to explain the entirety of the project. The narrative should explain:

- What is your approach?
- Why is your approach the best approach?
- What are the specific steps in your approach?
- How will you demonstrate the cost effectiveness of your approach?
- How will you ensure the end product is deployed?

Ensure you respond to the scoring criteria described in Section IV.F.
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.

Be sure to include in the technical tasks:

- At least one product deliverable per task.
- Address requirements in Section II.B.

Be sure to include in the Project Schedule (Attachment 6a):

- Product deliverables that correspond with the Scope of Work.
- Realistic dates on when product deliverables can be completed.
Identify how you will be spending Energy Commission funds and match funds to complete the project.

Provide a separate budget form for each subcontractor receiving $100,000 or more in Energy Commission funds.

Submit in the format provided. Do not delete sheets or rows, or use the hide/unhide functions.

Ensure that all rates provided are maximum rates for the entire project term.
Commitment and Support Letter Forms (Attachment 11)

- Follow guidelines provided for commitment and support letters.
  - Commitment letters are required for entities or individuals that are committing match funding, testing/demonstration sites, including the Prime.
  - Any project partners that will make contributions to the project (other than match and sites) must submit a commitment letter.
  - Support letters describe a project stakeholder’s interest or involvement in the project. All applicants must submit at least one support letter.
  - Limit to two pages per letter, excluding the cover page.
How will my Application be Evaluated?

Application Screening

**Admin Screening Process**

1. Energy Commission staff screens applications per criteria in Section IV.E.
2. Criteria are evaluated on a pass/fail basis.
3. Applicants must pass all screening criteria or the application will be disqualified.

**Some Reasons for Disqualification**

- Application is not submitted by the specified due date and time.
- Applicant did not sign the Application Form (Attachment 1).
- Application does not include one or more support letters.
- Application contains confidential material.
How will my Application be Evaluated?

Application Scoring

- Evaluation Committee applies the scoring scale to the scoring criteria.
- Applications must obtain a minimum passing score of 49 points for Criteria 1-4 in order to continue evaluation.
- Applications must obtain a minimum passing score of 70 points for Criteria 1-7 in order to be considered for funding.
- Each Applicant must review the Evaluation and Award Process section of the solicitation and ensure your application provides a clear and complete response to each scoring criteria.

<table>
<thead>
<tr>
<th>Scoring Criteria</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Technical Merit and Need</td>
<td>20</td>
</tr>
<tr>
<td>2. Technical Approach</td>
<td>20</td>
</tr>
<tr>
<td>3. Impacts and Benefits for CA IOU Ratepayers</td>
<td>20</td>
</tr>
<tr>
<td>4. Team Qualifications, Capabilities and Resources</td>
<td>10</td>
</tr>
<tr>
<td>5. Budget and Cost-Effectiveness</td>
<td>10</td>
</tr>
<tr>
<td>6. Natural Gas R&amp;D Funds Spent in CA</td>
<td>15</td>
</tr>
<tr>
<td>7. Ratio of Direct Labor and Fringe Benefit Costs to Loaded Labor Costs</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
<tr>
<td>Minimum Points to Pass</td>
<td>70</td>
</tr>
</tbody>
</table>
How will my Application be Evaluated?

Additional Bonus Points

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

- Match Funding
- Disadvantaged Communities
- California Based Entities

<table>
<thead>
<tr>
<th>Scoring Criteria</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Match Funding</td>
<td>10</td>
</tr>
<tr>
<td>9. Disadvantaged Communities</td>
<td>5</td>
</tr>
<tr>
<td>10. California Based Entities</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Bonus Points</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>
Match Funding Points

Applicants may receive up to 10 additional preference points based on the criteria below:

- Up to 5 points will be awarded based on the percentage of match funding relative to the Natural Gas R&D Program funds requested.
- 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.
- Refer to Section IV.F in the Solicitation Manual for more details on the match funding scoring criteria.
Disadvantaged Communities

• Projects with all test or demonstration sites located in disadvantaged communities and justifies how the project will benefit disadvantaged communities will receive additional points.

• A disadvantaged community is identified by census tract and represents the 25% highest scoring tracts in CalEnviroScreen 3.0 or later versions.

GFO Submission Requirements (Electronic)

- Preferred method of Delivery is the Energy Commission Grant Solicitation System, available at: https://gss.energy.ca.gov/
- Electronic files must be in Microsoft Office Word (.doc, .docx) and Excel (.xls, .xlsx) formats, unless originally provided in solicitation in another format.
- Attachments requiring signatures (Application Form and Support/Commitment Letters) may be scanned and submitted in PDF format.
- First-time users must register as a new user to access system.
- “How to Apply” video: http://www.energy.ca.gov/contracts/GSS/GSS_How_to_Apply_Video.mp4
GFO Submission Requirements (Hard Copy)

- Submit Applications with all attachments in the order specified by the due date and time listed in Section III of the manual.
- Application documents should meet formatting requirements, page limits, and number of copies specified in the GFO.
- Provide one hard copy and one electronic copy (CD-ROM or USB stick) containing electronic files of the application.
Next Steps After Grant Award

- **Notice of Proposed Award:** Shows total proposed funding amounts, rank order of applicants by project group, and the amount of each proposed award.
- **Agreement Development:** Proposal documents will be processed into a legal agreement.
- **Failure to Execute:** The Energy Commission reserves the right to cancel the pending award if an agreement cannot be successfully executed with an applicant. (See Section IV.B)
- **Project Start:** Recipients may begin work on the project only after the agreement is fully executed (approved at an Energy Commission business meeting and signed by the Recipient and the Energy Commission).
- **Debriefs:** Applicants not awarded may request a debrief from the Energy Commission through the Commission Agreement Officer with in 30 days of the NOPA posting.
# Key Dates

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solicitation Release</td>
<td>December 20, 2018</td>
</tr>
<tr>
<td>Pre-Application Workshop</td>
<td>January 10, 2019 at 10:00 am</td>
</tr>
<tr>
<td><strong>Deadline for Written Questions</strong></td>
<td><strong>January 14, 2019 at 5:00 pm</strong></td>
</tr>
<tr>
<td>Anticipated Distribution of Questions and Answers</td>
<td>Week of January 21st</td>
</tr>
<tr>
<td><strong>Deadline to Submit Applications</strong></td>
<td><strong>February 4, 2019 at 5:00 pm</strong></td>
</tr>
<tr>
<td>Anticipated Notice of Proposed Award Posting</td>
<td>March 20, 2019</td>
</tr>
<tr>
<td>Anticipated Energy Commission Business Meeting</td>
<td>May 2019</td>
</tr>
<tr>
<td>Anticipated Agreement Start Date</td>
<td>June 2019</td>
</tr>
<tr>
<td>Anticipated Agreement End Date</td>
<td>March 30, 2022</td>
</tr>
</tbody>
</table>
Questions and Answers

- Please introduce yourself by stating your name and affiliation.
- Keep questions under 3 minutes to allow time for others.
- Note that our official response will be given in writing and posted on the GFO webpage in two weeks.
Additional Questions

Please send all questions related to GFO-18-502 to:

Brad Worster
Commission Agreement Officer
1516 Ninth Street, MS-18
Sacramento, CA 95814
(916) 654-4299
(916) 654-4423 (fax)
Brad.Worster@energy.ca.gov

Deadline to submit questions:
Monday, January 14, 2019 5:00 PM