GFO-18-503 Pre-Application Workshop

Advancing Natural Gas Energy Efficiency Research in Existing Buildings and Baking Industry

Energy Research and Development Division

January 11, 2019
Amir Ehyai
## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 am</td>
<td>Welcome and Introduction</td>
</tr>
<tr>
<td>10:05 am</td>
<td>Solicitation Background</td>
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<tr>
<td></td>
<td>• Natural Gas Research Program</td>
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<td>• Purpose of Solicitation</td>
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<td>• Available Funding</td>
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<tr>
<td>10:25 am</td>
<td>Application Requirements</td>
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<td>• Project Group Requirements</td>
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<td>• Attachments</td>
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<td>• Submission Process</td>
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<td>11:00 am</td>
<td>Q&amp;As</td>
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<td>12:00 pm</td>
<td>Adjourn</td>
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</table>
Housekeeping

- In case of emergency
- Facilities
- Sign-in sheet
- 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-18-503
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-01-11-2019
- iPads are being passed around the room

Thanks!
Connecting With Us

CA Energy Commission

LinkedIn

Twitter

Instagram
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.
LinkedIn Networking Webinar

This virtual networking webinar is an opportunity for interested applicants to introduce themselves, explain their interests in this solicitation, and what they seeking from potential project partners. Individuals are encouraged to participate to leverage their connections.

The one-hour webinar will be held on **Thursday, January 17 at 2:00 p.m.**

Go to [https://energy.webex.com](https://energy.webex.com) and enter **Meeting Number: 492 360 831**

No password is required. Attendees may participate via telephone by calling (866) 469-3239 and entering meeting number **492 360 831.**

Subscribe to the subgroup: [https://www.linkedin.com/groups/13658530/](https://www.linkedin.com/groups/13658530/)

**NOTE:**
- Energy Commission staff will facilitate introductions.
- Staff involved in development of the solicitation and scoring of proposals will not be present.
- Staff will not provide answers to questions on GFO-18-503.
- All questions must be submitted to the Contract Agreement Officer.
Natural Gas Research Program

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
- **Budget:** $24 million annually
- **Purpose:** Benefit the ratepayers of natural gas investor-owned utilities*
- **Focus:**
  - Drive large-scale customer adoption of energy efficient and low-carbon technology solutions for natural gas end-uses that will be challenging to decarbonize
  - Minimize air quality impacts from natural gas end-uses to zero or near-zero levels
- **Objective:** Technological advancement and breakthroughs to overcome the barriers that prevent the achievement of the state’s statutory energy goals

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

## Energy Efficiency

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential Buildings Goal</th>
<th>Commercial Buildings Goal</th>
<th>Energy Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>40,000 GWh/year</td>
<td>63,000 GWh/year</td>
<td>2010</td>
</tr>
<tr>
<td>2013</td>
<td>ZNE Residential Buildings Goal</td>
<td>ZNE Commercial Buildings Goal</td>
<td>2013</td>
</tr>
<tr>
<td>2020</td>
<td>2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>2025</td>
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<td>2030</td>
<td>2030</td>
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<td>2045</td>
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</tr>
<tr>
<td>2050</td>
<td>2050</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Renewable Energy

<table>
<thead>
<tr>
<th>Year</th>
<th>RPS Goal</th>
<th>DG Goal</th>
<th>Utility-Scale Goal</th>
<th>Energy Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>11%</td>
<td>12 GW DG</td>
<td>8 GW Utility-Scale</td>
<td>100% Clean Electricity</td>
</tr>
<tr>
<td>2010</td>
<td>20%</td>
<td>12 GW DG</td>
<td>8 GW Utility-Scale</td>
<td>100% Clean Electricity</td>
</tr>
<tr>
<td>2013</td>
<td>33%</td>
<td>12 GW DG</td>
<td>8 GW Utility-Scale</td>
<td>100% Clean Electricity</td>
</tr>
<tr>
<td>2015</td>
<td>33%</td>
<td>12 GW DG</td>
<td>8 GW Utility-Scale</td>
<td>100% Clean Electricity</td>
</tr>
<tr>
<td>2016</td>
<td>60%</td>
<td>12 GW DG</td>
<td>8 GW Utility-Scale</td>
<td>100% Clean Electricity</td>
</tr>
<tr>
<td>2020</td>
<td>60%</td>
<td>12 GW DG</td>
<td>8 GW Utility-Scale</td>
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<td>60%</td>
<td>12 GW DG</td>
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<td>100% Clean Electricity</td>
</tr>
</tbody>
</table>

## Greenhouse Gas Reductions

<table>
<thead>
<tr>
<th>Year</th>
<th>Goal</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2008</td>
<td>11%</td>
<td>RPS Goal</td>
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<tr>
<td>2010</td>
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<td>RPS Goal</td>
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<td>33%</td>
<td>RPS Goal</td>
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<tr>
<td>2016</td>
<td>60%</td>
<td>RPS Goal</td>
</tr>
<tr>
<td>2020</td>
<td>60%</td>
<td>RPS Goal</td>
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<tr>
<td>2025</td>
<td>60%</td>
<td>RPS Goal</td>
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<tr>
<td>2030</td>
<td>60%</td>
<td>RPS Goal</td>
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<tr>
<td>2045</td>
<td>60%</td>
<td>RPS Goal</td>
</tr>
<tr>
<td>2050</td>
<td>60%</td>
<td>RPS Goal</td>
</tr>
</tbody>
</table>

**Reduction Goals:**
- **2010:** Reduce GHG Emissions to 1990 Level (AB 32) – Represents 30% Reduction from Projected GHG Emissions
- **2015:** Reduce GHG Emissions 80% Below 1990 Levels (Exec. Order)
- **2045:** 100% Clean Electricity
Purpose of Solicitation

Reduce **natural gas use** and **GHG** emissions in CA **existing buildings** and **industrial bakeries**.

**How?** Develop, demonstrate, and validate energy savings from advanced energy saving technologies and strategies for these sectors.

**Eligible:** Energy efficiency measures that save/reduce natural gas on site.

**Not Eligible:** Energy generation, such as cogeneration and fuel cells, and use of renewable energy, storage technologies or fuel switching are **not** eligible for funding.
## 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:</strong> Demonstrate and deploy pre-commercial or emerging energy efficient and GHG emission reducing technologies for the <strong>commercial, wholesale and industrial baking sector</strong></td>
<td>$4,400,000</td>
<td>$1,000,000</td>
<td>$4,400,000</td>
</tr>
<tr>
<td><strong>Group 2:</strong> Improve efficiency and reduce GHG and other emissions from <strong>residential room and wall heaters</strong></td>
<td>$2,000,000</td>
<td>No Minimum</td>
<td>$2,000,000</td>
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<tr>
<td><strong>Group 3:</strong> Improve <strong>hot water distribution system</strong> efficiency in existing homes</td>
<td>$1,500,000</td>
<td>No Minimum</td>
<td>$1,500,000</td>
</tr>
<tr>
<td><strong>Group 4:</strong> Develop <strong>advanced insulation</strong> for existing homes using phase change materials</td>
<td>$1,570,000</td>
<td>No Minimum</td>
<td>$1,570,000</td>
</tr>
</tbody>
</table>
Match Funding

**Group 1:** 20% match funding is required.

**Groups 2, 3 and 4:** Match funding is optional.

**All:**

- Applications that include additional match funding will receive bonus 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.
- Energy Commission funds cannot be used for out-of-state travel or travel to conferences.
- Refer to Section I.F.2 in the Solicitation Manual for more details on match funding.
Technology Readiness Level (TRL)

**TRL 0**
- **Idea.** Unproven concept, no testing has been performed.

**TRL 1**
- **Basic research.** Principles postulated and observed but no experimental proof available.

**TRL 2**
- **Technology formation.** Concept and application have been formulated.

**TRL 3**
- **Applied Research.** First laboratory test completed; proof of concept.

**TRL 4**
- **Small scale prototype** built in laboratory environment.

**TRL 5**
- **Large scale prototype** pilot tested in intended environment.

**TRL 6**
- **Prototype system** tested in intended environment close to expected performance.

**TRL 7**
- **Demonstration system** operating in environment at pre-commercial scale.

**TRL 8**
- **First of kind commercial system.** Manufacturing issues solved.

**TRL 9**
- **Full commercial application**, technology available for consumers.
Group 1: Commercial, Wholesale, and Industrial-Sized Bakeries

Focus: Bakeries

Funding Amount: $4,400,000

Background:

- California’s baking industry consumes about 60 million therms of natural gas annually, and emits over 300,000 metric tons of CO2e.
- Potential for improvements: about 70 percent of total energy used by bakeries adds no value to the final product.
- Examples of potential research:
  - Advanced insulation and reflective coatings have potential for 25 percent energy savings.
  - Process optimization, advanced programming and controls can reduce energy use by 20 percent.
  - Improved heat recovery technology also have the potential of reducing energy use by 20 percent.
Group 1: Commercial, Wholesale, and Industrial-Sized Bakeries

Requirements:

- Minimum one demonstration site in California natural gas IOU service territory.
- Provide 20% or more in match share.
- Payback of 5 years or less
- Technology must be past proof-of-concept and ready to demonstrate under real-world operating conditions (TRL 6-9).
- Must have at least 500 hours of performance testing (e.g., field, lab, bench-scale, pilot-scale) and have verified data to justify the technology is ready for demonstration.
- Pathway to commercialization in California with support from potential manufacturing partners and industry.
- Must meet local air quality management district requirements.
Possible ways to strengthen proposal:

- Demonstrate ancillary benefits of the project: benefits for disadvantaged communities, improved safety and reliability, etc.
- Demonstrate technology adaptability beyond the specific application.
- Describe the potential market size for the demonstrated technologies in California.
- Describe potential future of the project and benefits for California ratepayers beyond the solicitation period.
- Demonstrate technology high potential to reduce GHG emissions for this sector if broadly adopted.
Group 2: Improve Efficiency and Reduce GHG and Other Emissions From Residential Room and Wall Heaters

**Focus:** Room and Wall Heaters

**Funding Amount:** $2,000,000

**Background:**

- Federally regulated product with low minimum efficiency standards.
- Wall and room heaters found in many multifamily and small single family homes—potentially higher prevalence of use in low-income communities.
- Limited information on population and operational performance makes it difficult to determine extent of a problem.
- Potential solutions also not well known.
- Potential health and safety concerns not well understood.
Group 2: Improve Efficiency and Reduce GHG and Other Emissions From Residential Room and Wall Heaters

Requirements:

- Applied Research and Development Project (TRL 3-5).
- Identify population and operational performance.
- Determine prevalence in disadvantaged and low-income communities.
- Monitor energy and indoor air quality performance in two existing residences (single family home or multifamily dwelling).
- Identify new materials or alternative designs to reduce new or retrofit equipment and installation costs.
- Test alternative units or designs in two residential test sites
- Monitoring and test sites must be in PG&E, SDG&E or SoCal Gas natural gas service territory.
Group 2: Improve Efficiency and Reduce GHG and Other Emissions From Residential Room and Wall Heaters

Possible ways to strengthen proposal:

- Recommendations that do not increase equipment or installation costs.
- Test health and safety risks and develop mitigation strategies for recommendations.
- Examine barriers and develop opportunities to introducing high efficiency, cost-effective retrofit or replacement options.
- Demonstrate energy savings, greenhouse gas reductions and other benefits, opportunities and options for disadvantaged and low-income communities.
- Develop data and analysis for policy makers to encourage updating applicable codes and standards.
Group 3: Improve Hot Water Distribution System Efficiency in Existing Homes

**Focus:** Hot Water Distribution Systems

**Funding Amount:** $1,500,000

**Background:**

- Domestic hot water contributes to as much as 50% of natural gas use in residential buildings.
- Retrofit opportunities for hot water distribution systems lagging.
- Under slab uninsulated hot water distribution piping in older homes causes heat loss.
- Hot water pipes often oversized leading to long hot water wait times at faucet.
- Few options for retrofitting under slab water distribution systems.
Group 3: Improve Hot Water Distribution System Efficiency in Existing Homes

Requirements:

- Applied Research and Development Project (TRL 3-5).
- Identify an innovative technology or retrofit solution that could be installed in-situ to minimize costs, while increasing pipe flow efficiency and reducing heat loss due to uninsulated pipes.
- Potentially recover the capital cost from energy savings and other quantifiable benefits within 10 years when compared to existing, uninsulated pipes.
- Test innovative approach in laboratory.
- Demonstrate in two existing single-family homes with uninsulated hot water pipes under slab foundation.
- Pilot test sites must be in PG&E, SDG&E or SoCal Gas natural gas service territory.
Group 3: Improve Hot Water Distribution System Efficiency in Existing Homes

Possible ways to strengthen proposal:

- Technology or solution that can be installed in-situ to minimize retrofit costs.
- Strategy for adding insulation to uninsulated pipes below grade.
- Identify manufacturing and installation partners that could aid in deployment to reduce capital and installation costs.
- Strategies for widespread deployment and applicability to residential, multifamily and commercial markets.
- Develop best practices guide for in-situ hot water distribution system retrofits for residential applications.
Group 4: Develop Advanced Insulation for Existing Homes Using Phase Change Materials

**Focus:** Advanced Insulation with Phase Change Materials (PCMs)

**Funding Amount:** $1,570,000

**Background:**

- Older homes have little or no existing wall insulation.
- PCMs are low-volume and a versatile means for increasing insulation.
- PCM-enhanced insulation in walls, attics, and floors can reduce energy use.
- Research needed to identify which types and mixtures of PCMs work best for different CA climate zones.
- Innovative low-cost and non-intrusive installation techniques needed to encourage retrofits.
Group 4: Develop Advanced Insulation for Existing Homes Using Phase Change Materials

Requirements:

► Applied Research and Development Projects (TRL 3-5).
► Identify fire-resistant PCMs blended with varying types of insulation materials suitable for multiple California climate zones.
► Develop innovative installation techniques for adding insulation to existing walls and attic floors.
► Pilot test in three existing single-family homes of similar vintage with little or no existing wall insulation located in three different California building climate zones.
► Measure occupant thermal comport pre- and post-PCM addition.
► Test sites must be in PG&E, SDG&E or SoCal Gas natural gas service territory.
Possible ways to strengthen proposal:

▶ Develop least intrusive and low cost installation techniques to cost-effectively add PCM-enhanced insulation to existing walls and attic floors.

▶ Identify PCM blends that have the most impact for reducing natural gas and GHG emission to California's natural gas IOU ratepayers.

▶ Compare performance, cost, energy and cost savings, and other benefits compared to standard insulation materials.

▶ Identify manufacturing and installation partners that could aid in deployment to reduce capital and installation costs.
Measurement & Verification (M&V) Requirements

All Groups
- Include M&V Plan in Project Narrative (Attachment 4).
- Use Attachment 13 (References for Calculating Energy End-Use and GHG Emissions) for energy saving estimates and GHG impacts.
- See Measurement and Verification Plan for measurement periods (Section II.B.3)

Group specific requirements
- Group 1:
  - Independent, third-party M&V
  - Minimum three months pre-retrofit period for baseline
  - 6-12 months post project installation
- Groups 2, 3 and 4:
  - Pre-retrofit periods of 4 -12 months, by group
  - 12 month post-retrofit M&V
Eligible Applicants

- **Entity types:** This is an open solicitation for public and private entities.

- **Agreement terms:** Applicants must agree to the CEC’s PIER research terms and conditions: [http://www.energy.ca.gov/research/contractors.html](http://www.energy.ca.gov/research/contractors.html)

- **Registered to do business in CA:** 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](http://www.sos.ca.gov)
Application Forms

1. Application Form (requires signature) (.pdf)
2. Executive Summary (.docx)
3. Fact Sheet (.docx)
4. Project Narrative (.docx)
5. Project Team (.docx, .pdf)
6. Scope of Work (.docx)
7. Budget (.xlsx)
8. CEQA Compliance Form (.docx)
9. References and Work Product Form (.docx, .pdf)
10. Contact List (.docx)
11. Commitment and Support Letters (requires signature) (.pdf)
12. California Based Entity Form (.docx)
Project Narrative (Attachment 4)

This is your opportunity to explain the entirety of the project.

Questions to address in your narrative:

- Why is your project important?
- What will you be doing in your project?
- How are you going to complete the project?
- How will this benefit natural gas ratepayers?
- Address the requirements in Project Focus section (II.B.2) for the research objectives of your project group
- Include information about permitting and CEQA review required for the project
- Respond to the Scoring Criteria (section IV.F).
Scope of Work and Schedule

Scope of Work (Attachment 6)

► Tell us exactly what you are proposing to do in your project.
► Identify what work products you will deliver to the Energy Commission.
► For each technical task, please include:
  ➢ At least one product deliverable per task.
  ➢ The research objectives for your project group, described in Section II.B.2.

Project Schedule (Attachment 6a), include:

► Product deliverables described in the scope of work.
► Realistic dates for product deliverables.
Budget (Attachment 7)

- Show use of Energy Commission funds and match funds
- Subcontractors receiving $100,000 or more Energy Commission funds must complete a separate budget form.
- 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.
- Use **unloaded** labor rates and show fringe benefits and indirect costs, if any.
- Prevailing wage: Projects that receive an award of public funds from the Energy Commission are likely to be considered public works and subject to prevailing wage requirements.
Submittal:
- Attachment 8 is required for each applicant.
- All applicants must complete this form, regardless of whether the proposed activity is considered a “project” under CEQA.

Timing:
- Failure to complete the CEQA process in a timely manner after the Energy Commission’s Notice of Proposed Award may result in the cancellation of a proposed award and allocation of funding to the next highest-scoring project.
- Time is of the essence. The Energy Commission must approve proposed awards at a business meeting prior to June 30, 2019 to avoid expiration of the funds.

CEQA Compliance:
- To comply with CEQA, the Commission must have CEQA-related information from applicants in a timely manner.
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.
- Support letters describe a project stakeholder’s interest or involvement in the project.

All applicants must submit at least one support letter.

- Match funding must be supported by a match fund commitment letter.
- Project partners making contributions to the project must submit a commitment letter.

Format: 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.

**Common 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 score of 52.5 points for Criteria 1-4 in order to continue evaluation.
- Applications must obtain a minimum score of 70 points for Criteria 1-7 to pass.
- Please review the Evaluation and Award Process description (Section IV of the solicitation manual) to 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>
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<tbody>
<tr>
<td>1. Technical Merit</td>
<td>20</td>
</tr>
<tr>
<td>2. Technical Approach</td>
<td>20</td>
</tr>
<tr>
<td>3. Impacts and Benefits for California NG IOU Ratepayers</td>
<td>20</td>
</tr>
<tr>
<td>4. Team Qualifications, Capabilities and Resources</td>
<td>15</td>
</tr>
<tr>
<td>5. Budget and Cost-Effectiveness</td>
<td>15</td>
</tr>
<tr>
<td>6. Natural Gas Research Program Funds Spent in California</td>
<td>5</td>
</tr>
<tr>
<td>7. Ratio of Direct Labor Costs to Indirect Costs</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>Minimum Points to Pass</strong></td>
<td><strong>70</strong></td>
</tr>
</tbody>
</table>
How will my Application be Evaluated?

Additional Bonus Points

- Passing applications (score of 70 or more from Criteria 1-7) will be considered for bonus points. Criteria for bonus points include:
  - Match Funding Above the Minimum
  - Disadvantaged or Low-Income Communities
  - California Based Entities Preference Points

<table>
<thead>
<tr>
<th>Scoring Criteria</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Match Funding Above the Minimum</td>
<td>10</td>
</tr>
<tr>
<td>9. Disadvantaged or Low-Income Communities</td>
<td>5</td>
</tr>
<tr>
<td>10. California Based Entities Preference Points</td>
<td>5</td>
</tr>
<tr>
<td>Total Bonus Points</td>
<td>20</td>
</tr>
</tbody>
</table>
Disadvantaged and Low-Income Communities

**Bonus Points:** Will be awarded to projects with 1) all sites located in disadvantaged or low-income communities and 2) that justify how the project will benefit the disadvantaged or low-income community.

**Definition:**

- **Disadvantaged Community:** Highest 25% scoring census tracts in CalEnviroScreen 3.0.

- **Low-income Communities:** Census tracts with median household incomes at or below 80% of the statewide median income.
Identification of Eligible Disadvantaged and Low-Income Communities

Please use ARB’s Priority Population mapping tool to identify eligible areas:

https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm

Eligible areas are red, blue, red/blue hashed, or orange
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 Section III.
- Provide one hard copy and one electronic copy (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.

Project Start: Recipients may begin work on the project only after the agreement is fully executed (which means approved at an Energy Commission business meeting and signed by the Recipient and the Energy Commission).
## 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 11, 2019 at 10:00 a.m.</td>
</tr>
<tr>
<td><strong>Deadline for Written Questions</strong></td>
<td><strong>January 14, 2019 at 5:00 p.m.</strong></td>
</tr>
<tr>
<td>LinkedIn Networking Webinar</td>
<td>Thursday, January 17 at 2:00 p.m.</td>
</tr>
<tr>
<td>Anticipated Distribution of Questions and Answers</td>
<td>Week of January 28, 2019</td>
</tr>
<tr>
<td><strong>Deadline to Submit Applications</strong></td>
<td><strong>February 15, 2019 at 5:00 p.m.</strong></td>
</tr>
<tr>
<td>Anticipated Notice of Proposed Award Posting</td>
<td>Week of March 4, 2019</td>
</tr>
<tr>
<td>Anticipated Energy Commission Business Meeting</td>
<td>June 12, 2019</td>
</tr>
<tr>
<td>Anticipated Agreement Start Date</td>
<td>June 30, 2019</td>
</tr>
<tr>
<td>Anticipated Agreement End Date</td>
<td>March 30, 2023</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-18-503 to:

Douglas Harvey
Commission Agreement Officer
1516 Ninth Street, MS-18
Sacramento, CA 95814
(916) 654-4747
(916) 654-4423 (fax)
Douglas.Harvey@energy.ca.gov

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