**GRANT FUNDING OPPORTUNITY**

**Industrial Carbon Dioxide Utilization for**

**Value Added Products**

**Gas R&D Program**



**Addendum 2**

**GFO-23-502**

http://www.energy.ca.gov/contracts/index.html

**State of California**

**California Energy Commission**

**September** [~~June]~~ 2024

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| **Attachments**

| Attachment Number | Title of Section |
| --- | --- |
| 1 | Executive Summary Form |
| 2 | Project Narrative Form |
| 3 | Project Team Form |
| 4 | Scope of Work Template |
| 5 | Project Schedule |
| 6 | Budget  |
| 7 | CEQA Compliance Form  |
| 8 | References and Work Product |
| 9 | Commitment and Support Letters Form ***(requires signature)*** |
| 10 | Project Performance Metrics |
| 11 | Applicant Declarations ***(requires signature)*** |
| 12 | California Based Entity (CBE) Form |
| 13 | Environmental Checklist Form – Appendix G from CEQA Handbook |

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# I. Introduction

## Purpose of Solicitation

The California Climate Crisis Act (AB 1279, 2022) established targets to reduce anthropogenic greenhouse gas (GHG) emissions by 85% below 1990 levels and reach carbon neutrality by 2045. Supporting this legislation, the California Air Resources Board’s (CARB) 2022 Scoping Plan specifies that carbon removal activities such as carbon capture, utilization, and storage (CCUS) are new approaches that will need to be deployed to help achieve these GHG emissions reduction goals. Carbon dioxide (CO2) utilization is a promising approach in facilitating adoption of carbon capture and carbon removal while partially diverting the need for long term transportation and underground storage of CO2.

Current CO2 utilization technologies are at an early stage of development and bear technical, economic, and market uncertainty. The carbon footprint associated with the energy consumption required to convert CO2 into value-added products prevents large-scale deployment of these technologies. The purpose of this solicitation is to improve the energy efficiency of innovative approaches and processes for manufacturing commodities using CO2 captured from industrial operations burning fossil gas. The goal is to decarbonize difficult-to-abate industrial fossil gas use via carbon dioxide utilization to create value-added products.

Areas of interest include:

1. Carbon Dioxide Mineralization for Cement, Concrete, and Materials
2. Conversion of Carbon Dioxide into Fuels, Chemicals, and Plastics
3. Conversion of Carbon Dioxide into Food Products and Textiles

Projects must fall within the following project groups:

* **Group 1**: Carbon Dioxide Utilization Research and Development; and
* **Group 2**: Carbon Dioxide Utilization Field Demonstrations.

See Part II of this solicitation for project eligibility requirements. Applications will be evaluated as follows: Stage One proposal screening and Stage Two proposal scoring. Applicants may submit multiple applications, though each application must address only one of the project groups identified above. If an applicant submits multiple applications that address the same project group, each application must be for a distinct project (i.e., no overlap with respect to the tasks described in the Scope of Work).

Prospective applicants looking for partnering opportunities for this funding opportunity should register on the California Energy Commission (CEC)’s Empower Innovation website at www.empowerinnovation.net

## Key Words/Terms

| **Word/Term** | **Definition** |
| --- | --- |
| Applicant | The entity that submits an application to this solicitation. |
| Application | An applicant’s written response to this solicitation. |
| AB | Assembly Bill  |
| Authorized Representative | The person submitting the application who has authority to enter into an agreement with the CEC.  |
| California Native American Tribe | A Native American Tribe located in California that is on the contact list maintained by the Native American Heritage Commission for the purposes of Chapter 905 of the Statutes of 2004 (Pub. Resources Code, § 21073). |
| California Tribal Organization | A corporation, association, or group controlled, sanctioned, or chartered by a California Native American tribe that is subject to its laws, the laws of the State of California, or the laws of the United States. |
| CAM | *Commission Agreement Manager,* the person designated by the CEC to oversee the performance of an agreement resulting from this solicitation and to serve as the main point of contact for the Recipient. |
| CAO | *Commission Agreement Officer*, the person designated by the CEC to oversee the internal administrative processes and to serves as the main point of contact for solicitation applicants. |
| CARB  | California Air Resources Board |
| CCUS | *Carbon capture, utilization, and storage* involves the capture of carbon dioxide from flue stacks that use hydrocarbon fuels, resulting in a concentrated stream of carbon dioxide that can be utilized in a range of applications or stored in deep geological formations. This solicitation will only fund carbon dioxide utilization. |
| CBE | California Based Entity |
| CEC | State Energy Resources Conservation and Development Commission or, the California Energy Commission. |
| CEC funds | *CEC funds* are Gas R&D grant funds awarded under this solicitation. Also referred to as grant funds. |
| CEQA | California Environmental Quality Act, California Public Resources Code Section 21000 et seq. |
| Clinker | A primary component of cement made by sintering limestone, clay, and other raw materials. Clinker production results in high process carbon dioxide emissions that come from limestone (calcium carbonate). |
| CO2 | *Carbon dioxide* |
| CO2 Utilization | *Carbon dioxide* utilization refers to use of captured anthropogenic carbon dioxide as a feedstock for the manufacturing of value-added commodities such as fuels, chemicals, food, and other materials. |
| Community Based Organization | A public or private nonprofit organization of demonstrated effectiveness that: 1. Has an office in the region (e.g., air basin or county) and meets the demographic profile of the communities they serve.
2. Has deployed projects and/or outreach efforts within the region (e.g., air basin or county) of the proposed disadvantaged or low-income community.
3. Has an official mission and vision statements that expressly identifies serving disadvantaged and/or low-income communities.
4. Currently employs staff member(s) who specialized in and are dedicated to – diversity, or equity, or inclusion, or is a 501(c)(3) non-profit.
 |
| CPUC | California Public Utilities Commission  |
| Days | *Days refers to calendar days.* |
| Disadvantaged Community | These are communities designated pursuant to Health and Safety Code section 39711 as representing the top 25% scoring census tracts from CalEnviroScreen along with other areas with high amounts of pollution and low populations as identified by the California Environmental Protection Agency. (https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40)  |
| Gas IOU | *Gas Investor-owned utility,* including Pacific Gas and Electric Co., San Diego Gas and Electric Co., and Southern California Gas Co. |
| GHG | *Greenhouse gas* |
| IEPR | Integrated Energy Policy Report |
| Incumbent product/process | Refers to currently used, commercially available manufacturing processes or products, especially those that rely on energy-intensive industrial processes or fossil resources |
| Low-Income Community | *Low-income Communities* are defined as communities within census tracts with median household incomes at or below 80 percent of the statewide median income or the applicable low-income threshold listed in the state income limits updated by the Department of Housing and Community Development. (https://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits.shtml) |
| Major Subrecipient  | A Subrecipient that is budgeted to receive $100,000 or more of CEC funds, not including any equipment or match funds that may be provide by the Subrecipient.  |
| NETL | *National Energy Technology Laboratory* |
| NOPA | *Notice of Proposed Award,* a public notice by the CEC that identifies award recipients. |
| Pre-Commercial Technology | *Pre-commercial Technology* means a technology that has not reached commercial maturity or been deployed at scales sufficiently large and in conditions sufficiently reflective of anticipated actual operating environments to enable the appraisal of operational and performance characteristics, or of financial risks. |
| Pilot Test | *Pilot test* means small scale testing in the laboratory or testing on a small portion of the production line of the affected industry. Pilot tests help to verify the design and validity of an approach, and adjustments can be made at this stage before full-scale demonstrations. |
| Principal Investigator | The technical lead for the applicant’s project, who is responsible for overseeing the project; in some instances, the Principal Investigator and Project Manager may be the same person.  |
| Project Manager | The person designated by the applicant to oversee the project and to serve as the main point of contact for the CEC. |
| Project Partner | An entity or individual that contributes financially or otherwise to the project (e.g., match funding, provision of a test, demonstration or deployment site), and does not receive CEC funds.  |
| Recipient | An entity receiving an award under this solicitation. |
| SB | Senate Bill |
| Solicitation | This entire document, including all attachments, exhibits, any addendum and written notices, and questions and answers (“solicitation” may be used interchangeably with “Grant Funding Opportunity”).  |
| Subrecipient  | A person or entity that receives grant funds directly from a grant Recipient and is entrusted to make decisions about how to conduct some of the grant’s activities. A Subrecipient’s role involves discretion over grant activities and is not merely just selling goods or services. |
| Sub-Subrecipient | Has the same meaning as a Subrecipient except that it receives grant funds from a Subrecipient or any lower tier level of a Sub-Subrecipient. |
| State | State of California |
| TRL | Technology readiness levels are a method for estimating the maturity of technologies during the acquisition phase of a program.Source: U.S. Department of Energy, “Technology Readiness Assessment Guide”. <https://www2.lbl.gov/dir/assets/docs/TRL%20guide.pdf> |
| Vendor | A person or entity that sells goods or services to the grant Recipient, Subrecipient, or any lower-tiered level of Sub-Subrecipient, in exchange for some of the grant funds, and does not make decisions about how to perform the grant’s activities. The Vendor’s role is ministerial and does not involve discretion over grant activities. |

## Project Focus

Research supported by this solicitation will investigate improvements to the technical and economic potential of technologies and approaches that can convert waste CO2 from industrial flue gas into value-added products. Acceptable sources of CO2 for CO2 utilization products include both industrial flue or process gas and direct air capture, as long as the resulting products can justify benefits to gas ratepayers via reduction of GHG emissions and reduced industrial gas use. Direct air capture technology development is not eligible for funding.

The solicitation will target chemical and biological approaches to waste stream CO2 upgrading, including CO2 mineralization, catalytic conversion of CO2 into useful chemicals and chemical precursors, and the use of live organisms such as algae and microbial species to convert CO2 into food, textiles, plastics, and pigments. Expected outcomes include increased energy efficiency of the proposed technology and increased market potential of CO2-derived commercial products that could offset the cost of carbon capture.

This solicitation will focus on CO2 utilization technologies under any of the following research topics:

1. Carbon Dioxide Mineralization for Cement, Concrete, and Materials

This topic focuses on research, development, and demonstration of CO2 mineralization in cement and concrete manufacturing applications with the goal of improving energy efficiency and lowering the carbon intensity of incumbent cement/concrete operations. Efforts may include lowering the energy intensity of heating processes, electrifying low temperature processes, and increasing utilization of zero carbon energy sources.

Example projects include but are not limited to:

* CO2 mineralization to produce calcium carbonate or other synthetic cement/concrete aggregates that reduce CO2 emissions, such as reducing the need for, or amount of, clinker produced.
* CO2 injection into cement mixtures for concrete curing.
* CO2 mineralization to produce commercial or industrial grade carbonate salts.
1. Conversion of Carbon Dioxide into Fuels, Chemicals, and Plastics

This topic focuses on research, development, and demonstration of CO2 conversion into fuels; chemicals; plastics; and/or the chemical precursors of fuels, chemicals, and plastics that would otherwise be derived from fossil sources, with the goal of improving energy efficiency and reducing the carbon intensity of current processes and operations.

Example projects include but are not limited to:

* Electrochemical or solar-based thermochemical conversion of CO2 using zero- and low-carbon energy sources to produce methanol, ethanol, ethylene, sustainable aviation fuels, etc.
* Algae farming using CO2 as a feedstock for biomass growth to produce dyes, pigments, or plastics/plastic precursors.
* Microorganism fermentation or enzyme catalysis of CO2 to produce multi-carbon chemicals and plastics.
1. Conversion of Carbon Dioxide into Food Products and Textiles

This topic focuses on research, development, and demonstration of CO2 conversion and processing to create food products for human or animal consumption, as well as textiles, with the goal of improving the energy efficiency and reducing the carbon intensity of current incumbent operations.

Example projects include but are not limited to:

* Algae farming using CO2 as a feedstock for biomass growth to produce edible protein, animal feed, or textiles.
* Microorganism fermentation or enzyme catalysis of CO2 to produce edible protein, animal feed, or textiles.

The focus of this solicitation will be on technologies currently between technology readiness level (TRL) 4-7 that can progress at least one TRL by the end of the agreement. Two project groups are established for this solicitation based on TRL at the start of the project:

**1. Group 1: Carbon Dioxide Utilization Research and Development**

This group will focus on technologies between TRL 4-5 at the start of the agreement. Research and development efforts must target CO2 utilization technology and resulting products with reduced carbon intensity and improved energy efficiency as outlined in Table 1:

Table 1: Research Goals for Group 1

|  |  |
| --- | --- |
| **Research Metrics** | **Research Goals** |
| Carbon intensity relative to incumbent product | 85% reduction of GHG emissions |
| Energy efficiency improvement of proposed technology from start to end of the agreement | 10% improvement of energy efficiency |

The following items must be included in the **Technical Merit** section of the project narrative (Attachment 2):

1. Discuss and justify how the project will meet the research goals listed in Table 1. Baseline performance and energy use are to be described and justified by applicant.
2. Identify the potential source and reliability of waste CO2, such as a carbon capture from an industrial partner using fossil gas, and purity requirements for use in the proposed technology.

The following items must be included in the **Technical Approach** section of the project narrative (Attachment 2):

1. Describe and discuss plans for engagement with environmental justice organizations and community-based groups to address potential needs and concerns of local communities.

The following items must be included in the **Impacts and Benefits for CA IOU Ratepayers** section of the project narrative (Attachment 2):

1. Establish GHG emissions and energy usage of similar incumbent products versus the CO2-based product.
2. Estimate life cycle and cost analysis at pilot and commercial scale, such as:
	1. estimated energy consumption (therms, kilowatt-hours) per unit of CO2 processed
	2. estimate of other material consumption (e.g., chemicals, water, etc.) per unit of CO2 used
	3. estimated cost of waste material disposal
	4. CO2 emissions, including fugitive emissions not converted by proposed technology

**2. Group 2: Carbon Dioxide Utilization Field Demonstrations**

This group will focus on technologies between TRL 6-7 at the start of the agreement. Field demonstration research efforts must reduce the carbon intensity and improve the energy efficiency and market preparedness of the CO2 utilization technology and resulting products, as outlined in Table 2:

Table 2: Research Goals for Group 2

|  |  |
| --- | --- |
| **Research Metrics** | **Research Goals** |
| Carbon intensity relative to incumbent product | 85% reduction of GHG emissions |
| Energy efficiency improvement of proposed technology from start to end of the agreement | 10% improvement of energy efficiency |
| Cost and scalability | Proposed product value is ≥10% higher than the cost of manufacturing |
| Performance standards | Proposed product is at least compliant with industry and/or commercial standards identified by the applicant |
| Market potential | Estimate and justify the market potential for fully scaled-up proposed technology in California, and provide purchase agreements from at least two companies |

The following items must be included in the **Technical Merit** section of the project narrative (Attachment 2):

1. Discuss and justify how the project will meet the research goals listed in Table 2. Baseline performance, energy use, and performance standards are to be described and justified by applicant.
2. For projects converting CO2 into food products:
	* Describe how the project will demonstrate increased protein content in animal feed compared to market standards such as soy and fishmeal and potential decreases in energy and CO2 emissions due to reductions in agricultural activities (animal feed, water, processing etc.).
3. Identify at least two potential market partners for the CO2-derived commodity and include copies of support letters as requested in Attachment 9.
	* As a measure of scale requirements for CO2 conversion in Group 2 demonstration projects, each purchase agreement must be valued at greater than or equal to 25% of CEC requested funds.

The following items must be included in the **Technical Approach** section of the project narrative (Attachment 2):

1. Describe and discuss plans for engagement with environmental justice organizations and community-based groups to address potential needs and concerns of local communities. Describe how community benefits plan will be developed and implemented.

The following items must be included in the **Impacts and Benefits for CA IOU Ratepayers** section of the project narrative (Attachment 2):

1. Describe how the project will verify reduced emissions and gas use via comprehensive life cycle analysis.
	* For projects converting CO2 into fuels:
		+ Describe how the project will demonstrate a net reduction in emissions, including criteria air pollutants, compared to incumbent chemical manufacturing.
		+ Provide independent laboratory results showing that fuels made for combustion will be able to reduce criteria air pollutant emissions compared to incumbent fuel production and combustion processes.
		+ Provide documentation of potential to comply with all local air quality emission requirements when used as fuel.

The following items must be included in the **Budget and Cost Effectiveness** section of the project narrative (Attachment 2):

1. Describe and discuss cost-effectiveness of the proposal that includes estimated project fixed costs and other costs necessary for long term use (e.g., beyond the term of proposed project).

Measurement and Verification Plan

The Project Narrative (Attachment) must include a Measurement and Verification Plan that describes how actual project benefits will be measured and quantified, such as by identifying reduced carbon intensity compared to incumbent products and processes and improved energy efficiency (therms, kilowatt-hours per kg of product) of the proposed technology. The activities proposed in the Measurement and Verification Plan must be included in the “Technical Tasks” section of the Scope of Work Template (Attachment)

## Funding

1. **Amount Available and Minimum/ Maximum Funding Amounts**

There is **up to $6,100,000** available for grants awarded under this solicitation. The total, minimum, and maximum funding amounts for each project group are listed below.

| Project Group | Available Funding | Minimum award amount | Maximum award amount | Minimum match funding(% of Gas R&D Funds Requested) |
| --- | --- | --- | --- | --- |
| Group 1: CO2 Utilization R&D | $2,100,000 | $300,000 | $500,000 | None |
| Group 2: CO2 Utilization Field Demonstration | $4,000,000 | $2,000,000 | $4,000,000 | 20% |

1. **Match Funding Requirement**

Match funding is required **for Group 2** in the amount of at least **20%** of the requested project funds.

Match funding is not required for **Group 1**. However, **Group 1** applications that include match funding will receive additional points during the scoring phase (see Scoring Criteria in Section IV F).

For the definition of match funding, see Section I. K.

1. **Change in Funding Amount**

Along with any other rights and remedies available to it, the CEC reserves the right to:

* Increase or decrease the available funding and the minimum/maximum award amounts described in this section.
* Allocate any additional or unawarded funds to passing applications, in rank order.
* Reallocate funding between any of the groups
* Reduce funding to an amount deemed appropriate if the budgeted funds do not provide full funding for agreements. In this event, the Recipient and Commission Agreement Manager (CAM) will reach agreement on a reduced Scope of Work commensurate with available funding.

## Key Activities Schedule

Key activities, dates, and times for this solicitation and for agreements resulting from this solicitation are presented below. An addendum will be released if the dates change for activities that appear in **bold.**

| ACTIVITY | DATE | TIME[[1]](#footnote-2)  |
| --- | --- | --- |
| Solicitation Release | March 13, 2024 |  |
| **Pre-Application Workshop**  | **April 16, 2024** | **10:00 a.m.** |
| **Deadline for Written Questions[[2]](#footnote-3)** | **April 23, 2024** | **5:00 p.m.** |
| Anticipated Distribution of Questions and Answers | Week of May 13, 2024 |  |
| **Deadline to Submit Applications** | **August 07, 2024** | **11:59 p.m.** |
| Anticipated Notice of Proposed Award (NOPA) Posting Date | Week of [~~September 9, 2024]~~ **October 7, 2024** |  |
| Anticipated Energy Commission Business Meeting Date | ~~[November 13, 2024]~~**January 21, 2024** |  |
| Anticipated Agreement Start Date | ~~[December 18, 2024]~~**February 25, 2024** |  |
| Anticipated Agreement End Date  | March 31, 2028 |  |

## Notice of Pre-Application Workshop

CEC staff will hold one Pre-Application Workshop to discuss this solicitation with potential applicants. Participation is optional but encouraged. The Pre-Application Workshop will be held remotely. Applicants may attend the workshop via the internet (Zoom, see instructions below), or via conference call on the date and at the time and location listed below. Please refer to the CEC's website at www.energy.ca.gov/contracts/index.html to confirm the date and time. Please be aware that the meeting will be recorded.

**Date and time:** April 16, 2024, 10:00 AM

**Zoom Instructions:**

To join the Zoom meeting, go to https://zoom.us/join and enter the Meeting ID below and select “join from your browser”. Participants will then enter the meeting password listed below and their name. Participants will select the “Join” button.

**Meeting ID:** 881 0794 0638

**Meeting Password:** 117216

**Topic:** GFO-23-502 Pre-Application Workshop: Industrial Carbon Dioxide Utilization for Value Added Products

**Telephone Access Only:**

Call **1-888 475 4499** (Toll Free) or **1-877 853 5257** (Toll Free). When prompted, enter the meeting number above. International callers may select a number from the Zoom International Dial-in Number List at: https://energy.zoom.us/u/adjzKUXvoy. To comment, dial \*9 to “raise your hand” and \*6 to mute/unmute your phone line.

**Access by Mobile Device:**

Download the application from the Zoom Download Center, https://energy.zoom.us/download.

**Technical Support for Pre-Application Workshop:**

* For assistance with problems or questions about joining or attending the meeting,

please call Zoom Technical Support at **1-888-799-9666 ext. 2.** You may also contact the Public Advisor’s Office at publicadvisor@energy.ca.gov, or (916) 957-7910.

* System Requirements: To determine whether your computer is compatible, visit:

 http://support.-zoom.us/hc/en-us/articles/201362023-System-requirements-for-Windows

* If you have a disability and require assistance to participate, please Erica Rodriguez by e-mail at Erica.Rodriguez@energy.ca.gov or (916) 764-5705 at least five days in advance.

## Questions

During the solicitation process, for questions only related to submission of application in the new ECAMS system, please contact ECAMS.SalesforceSupport@energy.ca.gov. Through that email address applicants will be able to access a team of technical assistants who can answer questions about application submission. Please also see Section III.B for additional information about the ECAMS system.

For all other questions, including all technical and administrative questions that are not related to submission of applications in the ECAMS system, please contact the Commission Agreement Officer (CAO) listed below:

Angela Hockaday, Commission Agreement Officer

California Energy Commission

715 P, MS-1

Sacramento, California, 95814

E-mail: Angela.Hockaday@energy.ca.gov

Applicants may ask questions at the Pre-Application Workshop and may submit written questions via email. However, all **technical** questions must be received by the deadline listed in the “Key Activities Schedule” above. Questions received after the deadline may be answered at the CEC's discretion. **Non-technical** questions (e.g., administrative questions concerning application format requirements or attachment instructions) may be submitted to the CAO at any time prior to 5:00 p.m. of the application deadline date. Similarly, questions related to submission of applications in the ECAMS system may be submitted to ECAMS.SalesforceSupport@energy.ca.gov at any time prior to 5:00 p.m. of the application deadline date.

The questions and answers will also be posted on the Commission’s website at: https://www.energy.ca.gov/funding-opportunities/solicitations

If an applicant discovers a **conflict, discrepancy, omission, or other error** in the solicitation at any time prior 5:00 p.m. of the application deadline date, the applicant may notify the CEC in writing and request modification or clarification of the solicitation. The CEC, at its discretion will provide modifications or clarifications by either an addendum to the solicitation or by written notice to all entities that requested the solicitation. At its discretion, the CEC may, in addition to any other actions it may choose, re-open the question/answer period to provide all applicants the opportunity to seek any further clarification required.

**Any verbal communication with a Commission employee concerning this solicitation is not binding on the State and will in no way alter a specification, term, or condition of the solicitation. Therefore, all communication should be directed in writing to the assigned CAO.**

## Applicants’ Admonishment

This solicitation contains application requirements and instructions. Applicants are responsible for carefully reading the entire solicitation, asking appropriate questions in a timely manner, ensuring that all solicitation requirements are met, submitting all required responses in a complete manner by the required date and time, and carefully rereading the solicitation before submitting an application. In particular, please carefully read the Screening and Scoring Criteria and Grounds to Reject an Application or Cancel an Award in Part IV, and the relevant Gas R&D Grant terms and conditions (formerly known as PIER Grant terms and conditions) located under the Research and Development Funding Information tab at: <https://www.energy.ca.gov/funding-opportunities/funding-resources>.

Applicants are solely responsible for the cost of developing applications. This cost cannot be charged to the State. All submitted documents will become publicly available records and property of the State after the CEC posts the NOPA or the solicitation is cancelled. **ONLY SUBMIT INFORMATION YOU WANT MADE PUBLIC. MARKING ANY PORTION OF YOUR APPLICATION AS CONFIDENTIAL MAY RESULT IN DISQUALIFICATION**.

## Background

1. **Gas R&D Program[[3]](#footnote-4)**

This solicitation will award projects under the Gas R&D program (formerly PIER Natural Gas R&D program), which is funded by a ratepayer surcharge on gas consumed by ratepayers of gas Investor-Owned Utility (Gas IOUs) in California (see California Public Utilities Code section 890 and 895). The California Public Utilities Commission (CPUC) designated the CEC as administrator of the program in August 2004. [[4]](#footnote-5) The purpose of the program is to benefit California gas ratepayers by funding public interest research and development activities, which the CPUC has defined as “developing science or technology, the benefits of which accrues to California citizens and are not adequately addressed by competitive or regulated entities.”[[5]](#footnote-6)

1. **Program Areas, Strategic Objectives, and Funding Initiatives**

Gas R&D projects must fall within one or more specific focus areas (**“research initiatives”**) identified in the Gas R&D Budget Plan. This solicitation targets the following research initiative(s) from the Natural Gas R&D Budget Plan for Fiscal Year 2021/2022[[6]](#footnote-7):

* **Research Area**: Energy Efficiency
	+ **Research Initiative** Industrial Carbon Capture and Utilization
* **Applicable Laws, Policies, and Background Documents**

This solicitation addresses the energy goals described in the following laws, policies, and background documents.

Laws/Regulations

* **Assembly Bill (AB) 1279[[7]](#footnote-8) – California Climate Crisis Act of 2022**

Declares the policy of the state both to achieve net zero GHG no later than 2045, achieve and maintain net negative GHG emissions thereafter, and reduce GHG emissions to at least 85% below the 1990 levels. Requires CARB to work with relevant state agencies to ensure scoping plan identifies or recommends measures to achieve these policy goals and identifies or implements a variety of policies and strategies that enable CO2 removal solutions and CCUS technologies in California, as specified.

* **Senate Bill (SB) 905[[8]](#footnote-9) – Carbon Sequestration: Carbon Capture, Removal, Utilization, and Storage Program 2022**

This bill requires CARB to establish a CCUS program to evaluate the efficacy, safety, and viability of CCUS technologies and CO2 removal technologies and facilitate the capture and sequestration of CO2 from those technologies. Requires the program to ensure that CCUS projects include monitoring activities, and that state agencies oversee regulation and permitting and continue efforts to reduce GHG emissions and fossil fuel production in the state, among other requirements.

* **AB 209[[9]](#footnote-10) – Committee on Budget. Energy and Climate Change 2022**

This bill requires the CEC to establish various clean energy and decarbonization technology programs that reduce GHG emissions among other benefits, including: (1) the Industrial Grid Support and Decarbonization Program to provide financial incentives for the implementation of projects at industrial facilities; (2) the Food Production Investment Program to provide financial incentives for the implementation of projects to accelerate the adoption decarbonization technologies, and (3) the Carbon Removal Innovation Program to provide financial incentives for eligible projects that advance technologies for direct air capture of atmospheric carbon.

* **AB 32[[10]](#footnote-11) - Global Warming Solutions Act of 2006**

AB 32created a comprehensive program to reduce GHG emissions in California. GHG reduction strategies include a reduction mandate of 1990 levels by 2020 and a cap-and-trade program. AB 32 also designates CARB as the state agency charged with monitoring and regulating sources of GHG emissions and requires CARB to develop a Scoping Plan that describes the approach California will take to reduce GHGs. CARB must update the plan at least once every five years.

Additional information: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\_id=200520060AB32; https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan

Applicable Law: California Health and Safety Code §§ 38500 et. seq.

* **SB 32 - California Global Warming Solutions Act of 2006: emissions limit**

SB 32 expands on AB 32 by requiring that CARB ensure statewide GHG emissions are reduced to 40% below the 1990 level by no later than December 31, 2030. SB 32 further requires that these emission reductions are achieved in a manner that benefits the state’s most disadvantaged communities and is transparent and accountable to the public and the Legislature.

Additional information: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\_id=201520160SB32

Applicable Law: California Health and Safety Code § 38566.

Policies/Plans

* **California Air Resources Board’s Scoping Plan 2022**

Identifies a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. This plan also takes the unprecedented step of adding carbon neutrality as a science-based guide and touchstone for California’s climate work. The plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the state’s natural and working lands and using a variety of mechanical approaches.

Additional information:

https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents

* **Integrated Energy Policy Report (IEPR) (Biennial)**

California Public Resources Code Section 25302 requires the Energy Commission to release a biennial report that provides an overview of major energy trends and issues facing the state. The IEPR assesses and forecasts all aspects of energy industry supply, production, transportation, delivery, distribution, demand, and pricing. The Energy Commission uses these assessments and forecasts to develop energy policies and provide recommendations for future research and analysis areas.

Additional information: http://www.energy.ca.gov/energypolicy

Applicable Law: California Public Resources Code § 25300 et seq.

Reference Documents

Refer to the link below for information about past CEC research projects and activities:

* <http://www.energy.ca.gov/research/>

Refer to the documents below for information about activities associated with carbon dioxide utilization commercial products:

* **U.S. Department of Energy, DE-FOA-0002829 Carbon Utilization Procurement Grants Program:**

$100 million available to support states, local governments, and public utilities in purchasing products derived from converted carbon emissions. Carbon utilization products approved for procurement under this funding opportunity announcement will need to be on national energy technology laboratory’s (NETL) list of utilization procurement grant vendors after critical review by NETL of the products’ lifecycle analysis.

<https://www.energy.gov/fecm/funding-notice-bipartisan-infrastructure-law-carbon-utilization-procurement-grants>

<https://netl.doe.gov/upgrants>

## Match Funding

* **“Match funds”** includes cash or in-kind (non-cash) contributions provided by the applicant, subrecipients, or other parties including pilot testing, demonstration, and/or deployment sites (e.g., test site staff services) that will be used in performance of the proposed project.

“Match funds” do not include: CEC awards, future/contingent awards from other entities (public or private), the cost or value of the project work site, or the cost or value of structures or other improvements affixed to the project work site permanently or for an indefinite period of time (e.g., photovoltaic systems).

Definitions of “match funding” categories are listed below:

* + - **“Cash”** **match** means funds that are in the recipient’s possession or proposed by match partner and clearly identified in a support letter, and are reserved for the proposed project, meaning that they have not been committed for use or pledged as match for any other project. Cash match can include funding awards earned or received from other agencies for the proposed technologies or study (but not for the identical work). Proof that the funds exist as cash is required. Cash match will be considered more favorably than in-kind contributions during the scoring phase.
		- **“In-Kind”** **match** can be in the form of goods or services that are not reimbursed with CEC funds such as labor (if reasonable and justified), donated space, existing equipment, existing supplies, services provided by a third-party or subrecipient, and other expendable property in support of the project. The value of in-kind match is based on the fair market value of the goods and services provided at the time it is claimed as match. The value of existing equipment must be prorated for its use in the project and depreciated or amortized over the term of the project using generally accepted accounting principles. Labor rates for hours donated by non-employees who are not paid for their time must be consistent with those paid for similar work. Cost allocations must be reasonable and allocable to the proposed project. In-kind match share must be included in the agreement budget.

The grant recipient is expected to maintain appropriate documentation to support the fair market value of all in-kind match including match donated by third parties or major subrecipients.

* Match funds must be spent only during the agreement term, either before or concurrently with CEC funds or in accordance with an approved Match Fund Spending Plan. Match funds also must be reported in invoices submitted to the CEC.
* All applications that include match funds must submit commitment letters, **including applicant, subrecipients**, sub-subrecipients, and vendors that: (1) identify the source(s) of the funds; (2) justify the dollar value claimed; (3) provide an unqualified (i.e., without reservation or limitation) commitment that guarantees the availability of the funds for the project; and (4) provide a strategy for replacing the funds if they are significantly reduced or lost. Please see Attachment 9, Commitment and Support Letters Form Attachment. Commitment and support letters must be submitted with the application to be considered.
* Any match pledged in an application must be consistent. For example, in the ECAMS system and in the Budget Attachment applicants will be asked to enter the project’s total match funding. The amounts listed in those places should be consistent with the amount or dollar value described in the commitment letter(s) (e.g., if $5,000 “cash in hand” funds are pledged in a commitment letter, the match amounts entered in the ECAMS system and in the Budget must match this amount). If the amounts listed in an application are inconsistent, the total amount pledged in the commitment letter(s) will be considered for match funding points.
* Examples of preferred match share:
	+ - **“Travel”** refers to all travel required to complete the tasks identified in the Scope of Work. Travel includes in-state and out-of-state, and travel to conferences. CEC funds are limited to lodging and any form of transportation (e.g., airfare, rental car, public transit, parking, mileage). Use of match funds for out-of-state travel is encouraged, as the CEC discourages and may not approve the use of its funds for such travel. If an applicant plans to travel to conferences, including registration fees, they must use match funds.
		- **“Equipment” is** an item with a unit cost of at least $5,000 and a useful life of at least one year. **Purchasing equipment with match funding is encouraged** as there are no disposition requirements at the end of the agreement for such equipment. Typically, grant recipients may continue to use equipment purchased with CEC funds if the use is consistent with the intent of the original agreement.
		- **“Materials”** under Materials and Miscellaneous are items under the agreement that do not meet the definition of Equipment (unit cost of at least $5,000 and a useful life of at least one year). **Using match funds for purchasing items such as laptops, notebooks and/or personal tablets is encouraged, as Energy Commission funds for these purchases is not allowed.**

## Funds Spent in California and California-Based Entities

* Only CEC reimbursable funds counts towards funds spent in California and funds spent on California-Based Entities (CBEs) totals.
* "Spent in California" means that:
	+ (1) Funds in the "Direct Labor category and all categories calculated based on direct labor (e.g., fringe benefits, indirect costs and profit) are paid to individuals that pay California state income taxes on wages received for work performed under the agreement. Payments made to out-of-state workers do not count as “funds spent in California.” However, funds spent by out-of-state workers in California (e.g., hotel and food) can count as “funds spent in California.”; AND
	+ (2) Business transactions (e.g., material and equipment purchases, leases, and rentals) are entered into with a business located in California.
	+ (3) Total should include any applicable subrecipients, sub-subrecipients, and vendors.
* Airline ticket purchases for out-of-state travel and payments made to out-of-state workers are not considered funds “spent in California.” However, funds spent by out-of-state workers in California (e.g. lodging) and airline travel originating and ending in California are considered funds “spent in California.” A business located in California means: 1) businesses registered with Secretary of State AND 2) transaction is with a location in California that is directly related to the grant project (e.g., direct purchase of material and equipment to be used in the grant) and results in the support of California business and jobs.
	+ Example 1: Grant funds will be spent on temperature sensors.  The temperature sensors are manufactured in Washington. The recipient orders the temperature sensors directly from a CA based supply house.  The invoice shows that the transaction occurred with the CA based supply house. This transaction is eligible and can be counted as funds spent in CA.
	+ Example 2: Grant funds will be spent on temperature sensors. The temperature sensors are manufactured in Washington. The recipient orders the temperature sensors directly from Washington.  The manufacturer has training centers in CA that instructs purchasers on how to use the sensors. The invoice shows that the transaction occurred in Washington. This transaction is not eligible and cannot be counted as funds spent in CA.
* Pursuant to California Public Resources Code Section 25620.5(h), the CEC’s Gas R&D Program must give priority to CBEs when making awards. California Public Resources Code Section 25620.5(i) defines “CBE” as a corporation or other business entity organized for the transaction of business that either:
	+ Has its headquarters in California AND manufactures in California the product that is the subject of the award; or
	+ Has an office for the transaction of business in California and substantially manufactures the product or substantially performs the research within California that is the subject of the award.
* Applications must meet the following requirements in order to receive CBE preference points:
	+ The proposal must include a CBE as either the recipient or a subrecipients.
	+ The budget must show that the CBE(s) will receive more than 60.00% of the funds awarded.

# II. Applicant Eligibility Requirements

## Eligibility

This solicitation is open to all public and private entities. Demonstration projects in this solicitation must be located in the service territory of a California Gas IOU, which includes Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Gas Company. All projects in this solicitation must benefit Gas IOU ratepayers.

##  Terms and Conditions

Each grant agreement resulting from this solicitation will include terms and conditions that set forth the grant recipient’s rights and responsibilities. By submitting an application in the ECAMS system, each applicant agrees to enter into an agreement with the CEC to conduct the proposed project according to the terms and conditions that correspond to its organization, without negotiation: (1) University of California and California State University terms and conditions; (2) U.S. Department of Energy terms and conditions; (3) Special Terms and Conditions for California Native American Tribes and Tribal Organizations with Sovereign Immunity in addition to the standard terms and conditions; or (4) standard terms and conditions. All terms and conditions are located at https://www.energy.ca.gov/funding-opportunities/funding-resources. Please refer to the applicable Gas R&D Grant terms and conditions (formerly known as PIER Grant terms and conditions). Failure to agree to the terms and conditions by taking actions such as failing to provide the required authorizations and certifications or indicating that acceptance is based on modification of the terms may result in rejection of the application. Applicants must read the terms and conditions carefully. The CEC reserves the right to modify the terms and conditions prior to executing grant agreements.

If a California Native American Tribe (Tribe) or California Tribal Organization with sovereign immunity is listed as a proposed awardee in the Notice of Proposed Award, CEC staff must receive the following before bringing the proposed award to a CEC Business Meeting:

1. A resolution or other authorizing document by the governing body of the Tribe or California Tribal Organization authorizing the Tribe or California Tribal Organization to enter into the proposed agreement, including accepting the Special Terms and Conditions for California Native American Tribes and Tribal Organizations with Sovereign Immunity.

2. A limited waiver of sovereign immunity in the form and manner required by tribal law; and

3. A resolution or other authorizing document delegating authority to execute the agreement to an appropriate individual.

The above requirements may be provided in one or more documents. The document(s) will be included as an exhibit to the resulting grant agreement.

Delay in award. Any delay in the Tribe or Tribal Organization’s ability to provide such documentation may result in delayed award of the grant agreement.

Reservation of right to cancel proposed award. Funds available under this solicitation have encumbrance deadlines which the CEC must meet in order to avoid expiration of the funds. In addition to any other rights reserved to it under this solicitation or that it otherwise has, the CEC reserves the right to cancel a proposed award if it determines, in its sole and absolute discretion, that the documentation described above would likely not be provided prior to an encumbrance deadline, and that the CEC’s ability to meet its encumbrance deadline may thereby be jeopardized. In this instance, the CEC may cancel the proposed award and award funds to the next highest scoring applicant.

## California Secretary of State Registration

All corporations, limited liability companies (LLCs), limited partnerships (LPs) and limited liability partnerships (LLPs) that conduct intrastate business in California are required to be registered and in good standing with the California Secretary of State prior to its project being recommended for approval at an CEC Business Meeting.  If not currently registered with the California Secretary of State, applicants are encouraged to contact the Secretary of State’s Office as soon as possible to avoid potential delays in beginning the proposed project(s) (should the application be successful).  For more information, contact the Secretary of State’s Office via its website at www.sos.ca.gov.  Sole proprietors using a fictitious business name must be registered with the appropriate county and provide evidence of registration to the CEC prior to their project being recommended for approval at an CEC Business Meeting.

## Disadvantaged & Low-income Communities

In January of 2019, the CPUC Resolution G-3546 stated, “the Commission directs the CEC to enhance its engagement with disadvantaged communities.” In addition, the CPUC directed the Energy Commission to Incorporate an explicit long-term strategy for the role of the Gas R&D Program in the more aggressive statewide decarbonization goals set by SB 100 (De León, 2018) and Executive Order B-55-18.

The CEC is committed to ensuring all Californians have an opportunity to participate in and benefit from programs and services. While it is not required to complete the project within a disadvantaged community, demonstration projects located and benefiting disadvantaged and/or low-income communities will be considered under the scoring criteria for this GFO.

Low-income communities and households are defined as the census tracts and households, respectively, that are either at or below 80 percent of the statewide median income, or at or below the threshold designated as low-income by the California Department of Housing and Community Development (HCD). Visit the California Department of Housing & Community Development site for the current HCD State Income Limits: http://www.hcd.ca.gov/grants-funding/income-limits/index.shtml. Disadvantaged communities are defined as areas representing census tracts scoring in the top 25% in CalEnviroScreen. For more information on disadvantaged communities and to determine if your project is in a disadvantaged community, use the California Communities Environmental Health Screening tool (CalEnviroScreen): https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40.

## Russia Sanctions

The budget must NOT identify that CEC funds will be spent outside of the United States or for out-of-country travel. However, match funds may cover these costs if there are no legal restrictions. Recent legal restrictions may include Russian Sanctions as described below:

On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 (the EO) regarding Economic Sanctions against Russia and Russian entities and individuals. “Economic Sanctions” refers to sanctions imposed by the U.S. government in response to Russia’s actions in Ukraine, as well as any sanctions imposed under state law. The EO directs state agencies to terminate contracts with, and to refrain from entering any new contracts with, individuals or entities that are determined to be a target of Economic Sanctions.

 Accordingly, should the State determine Recipient is a target of Economic Sanctions or is conducting prohibited transactions with sanctioned individuals or entities, that shall be grounds for termination of this agreement. The State shall provide Recipient advance written notice of such termination, allowing Recipient at least 30 calendar days to provide a written response. Termination shall be at the sole discretion of the State.

# III. Application Organization and Submission Instructions

## Application Format, Page Limits, and Number of Copies

The following table summarizes the application formatting and page limit recommendations:

The CEC may have waived the requirement for a signature on application materials for this solicitation. If a notice regarding CEC’s waiver of the signature requirement appears here: https://www.energy.ca.gov/funding-opportunities/solicitations, the waiver applies to this solicitation. In the event of a conflict between the notice and any language in this solicitation regarding signatures, the notice will govern.

|  |  |
| --- | --- |
| **Format** | * **Font:** 11-point, Arial (excluding Excel spreadsheets, original template headers and footers, and commitment or support letters)
* **Margins:** No less than one inch on all sides (excluding headers and footers)
* **Spacing:** Single spaced, with a blank line between each paragraph
* **Signatures**: Wet signatures only (i.e., not electronic)
* **File Format:** MS Word version 2007 or later (.doc or .docx format), excluding Excel spreadsheets and commitment or support letters (PDF files are acceptable for the letters)
* **File Storage:** Electronic files of the application must be submitted on a USB memory stick when submitting via **hard copy.**
 |
| **Maximum Page Limit Recommendations** | * **Executive Summary** (Attachment): **two** pages
* **Project Narrative Form** (Attachment): **twenty** pages excluding documentation for California Environmental Quality Act (CEQA)
* **Project Team Form** (Attachment): **two** pages for each resume
* **Reference and Work Product Form** (Attachment): **one** page for each reference, **two** pages for each project description
* **Commitment and Support Letter Form** (Attachment): **two** pages, excluding the cover page
* **Scope of Work** (Attachment): **thirty** pages
* **Project Schedule** (Attachment): **four** pages
* There are no page limits for the following:
	+ **Budget Forms** (Attachment)
	+ **CEQA Compliance Form** (Attachment)
	+ **Project Performance Metrics** (Attachment)
 |

## Method For Delivery

The only method of submitting applications to this solicitation is Energy Commission Agreement Management System (ECAMS), available at: https://ecams.energy.ca.gov.

The CEC is providing a team of technical assistants to support applicants with this new process. Please email ECAMS.SalesforceSupport@energy.ca.gov for support.

ECAMS allows applicants to complete and submit their application to the CEC prior to the date and time specified in this solicitation. Files uploaded to the system must be in Microsoft Word XP (.doc format) or newer and Excel Office Suite formats unless originally provided in the solicitation in another format. Attachments requiring signatures, such as match funding commitment letters, may be scanned and submitted in PDF format. Completed Budget Forms, Attachment, must be in Excel format.

The deadline to submit applications through ECAMS system is 11:59 p.m. on the Deadline to Submit Applications date shown in the Key Activities Schedule. ECAMS automatically closes at 11:59 pm. If the full submittal process has not been completed before 11:59 p.m., your application will not be considered.

The CEC strongly encourages Applicants to upload and submit all applications by 5:00 p.m. because CEC staff will not be available after 5:00 p.m. or on weekends to assist with the upload process. And please note that while we endeavor to assist all would-be applicants, we can’t guarantee staff will be available for in-person consultation on the due date, so please plan accordingly.

Please give yourself ample time to complete all steps of the submission process: do not wait until right before the deadline to begin the process. Due to factors outside the CEC’s control and unrelated to ECAMS, upload times may be much longer than expected. For example, unexpected issues could occur, causing long delays that prevent timely submission. Please plan accordingly. For instructions on how to apply using the ECAMS system, please see the How to Apply document available on the CEC website at: https://www.energy.ca.gov/funding-opportunities/funding-resources, under General Funding Information, Energy Commission Agreement Management System (ECAMS).

First time users must register as a new user to access the system. There will be two types of user accounts to establish: 1) An organizational account, for the entity applying to the solicitation; and 2) user accounts for individuals who will be submitting the application on behalf of the organization.

Applicants will be required to upload all attachments marked “required” in the system in order for the application to be submitted.

## Application Content

Below is a general description of each required section of the application. Completeness in submitting all the information requested in each attachment will be factored into application scoring.

1. Executive Summary Form (Attachment 1)

The Executive Summary includes: 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; and a description of the project tasks and overall management of the agreement.

1. Project Narrative Form (Attachment 2)

This form will include the majority of the applicant’s responses to the Scoring Criteria in Section IV, including the following which must be addressed for both Applied Research & Technology Demonstration projects:

* 1. **Group Specific Questions**
		+ Include required group specific information (see Section I.C.) in the specified sections.
	2. **Project Readiness**
		+ Include information about the permitting required for the project and whether or not the permitting has been completed. If complete, provide appropriate documentation. If local jurisdiction CEQA review and project approval is not complete, applications must include information documenting progress towards and a schedule for achieving compliance under CEQA. All supporting documentation must be included in Attachment 7. Applicants may use Attachment 13 as a reference.
1. Project Team Form (Attachment 3)

Identify by name all key personnel[[11]](#footnote-12) assigned to the project, including the project manager and principal investigator (if applicable), and individuals employed by any major subrecipients (a major subrecipients is a subrecipients receiving $100,000 or more of Commission funds). Clearly describe their individual areas of responsibility. Include the information required for each individual, including a resume (maximum two pages).

1. Scope of Work Template (Attachments 4)

Applicants must include a completed Scope of Work for each project, as instructed in the template. The Scope of Work identifies the tasks required to complete the project.

Electronicfiles for the Scope of Work must be in **MS Word** file format**.**

1. Project Schedule (Attachment 5)

The Project Schedule includes a list of all products, meetings, and due dates. All work must be scheduled for completion by the “Key Dates” section of this solicitation manual.

Electronic files for the Project schedule must be in MS Excel file format.

1. Budget Forms (Attachment 6)

Because this solicitation is utilizing the new ECAMS system for submitting applications, applicants have two options for uploading a budget:

1. **Option 1: Prime Applicant’s budget is both keyed directly into ECAMS and uploaded as an MS Excel attachment; the Prime Major Subrecipient(s) budgets are uploaded as MS Excel attachments.** The new ECAMS system allows applicants to build the prime applicant’s budget directly into the system. At this time, there is no way to input major subrecipient budgets directly into the system. Instructions for inputting budget items into the ECAMS system are included at: https://www.energy.ca.gov/funding-opportunities/funding-resources.
2. **Option 2: Upload all budgets (Prime and Major Subrecipients) as MS Excel attachments** and leave the ECAMS budget sections blank.

Instructions for completing the budgets can be found in Budget Category Guidance at the ECAMS Resources page. **Read the instructions tab on the MS Excel attachments Attachment 6 before completing the worksheets**. Complete and submit information on **all** budget worksheets. The salaries, rates, and other costs entered on the worksheets will become a part of the final agreement.

1. All project expenditures (match share and reimbursable) must be made within the Anticipated Agreement Start and End dates listed in the “Key Activities Schedule” of this solicitation manual. Match share requirements are discussed in Part I.D and I.K of this solicitation. The entire term of the agreement and projected rate increases must be considered when preparing the budget.
2. The budget must reflect estimates for **actual** costs to be incurred during the agreement term. The CEC may only approve and reimburse for actual costs that are properly documented in accordance with the grant agreement terms and conditions. Rates and personnel shown must reflect the rates and personnel the applicant would include if selected as a Recipient.
3. The rates proposed, except for Direct Labor and Fringe Benefits, are considered capped and may not change during the agreement term. Except for Direct Labor and Fringe Benefits, the grant recipient will only be reimbursed for actual rates and not to exceed the capped rates. The rates proposed for Direct Labor and Fringe Benefits are treated as estimates; a grant recipient can invoice at higher rates as long as it is only invoicing for actual expenditures it has made. If an applicant, by law, cannot agree to Direct Labor and Fringe Benefits rates being treated as estimates, the applicant can request to modify this term. This modification may be negotiated if the applicant is proposed for award. The CEC retains the sole right to refuse to agree to any requested modifications. The budget must NOT include any grant recipient profit from the proposed project, either as a reimbursed item, match share, or as part of overhead or general and administrative expenses (subrecipient profit is allowable, though the maximum percentage allowed is 10% of the total subrecipient rates for labor, and other direct and indirect costs as indicated in the Category Budget tab). Please review the terms and conditions and budget forms for additional restrictions and requirements.
4. The budget must allow for the expenses of all meetings and products described in the Scope of Work. Meetings may be conducted at the CEC or by conference call, as determined by the CAM.
5. Applicants must budget for permits and insurance. Permitting costs may be accounted for in match share. Permit costs and the expenses associated with obtaining permits are not reimbursable with CEC funds, with the exception of costs incurred by University of California grant recipients.
6. The budget must NOT identify that CEC funds will be spent outside of the United States or for out-of-country travel.  However, match funds may cover these costs if there are no legal restrictions.
7. **Prevailing wage requirement:** Projects that receive an award of public funds from the CEC often involve construction, alteration, demolition, installation, repair or maintenance work over $1,000. For this reason, projects that receive an award of public funds from the CEC are likely to be considered public works under the California Labor Code. See Chapter 1 of Part 7 of Division 2 of the California Labor Code, commencing with Section 1720 and Title 8, California Code of Regulations, Chapter 8, Subchapter 3, commencing with Section 16000.

Projects deemed to be public works require among other things the payment of prevailing wages, which can be significantly higher than non-prevailing wages.

By accepting this grant, the grant recipient as a material term of this agreement shall be fully responsible for complying with all California public works requirements including but not limited to payment of prevailing wage. Therefore, as a material term of this grant, the grant recipient must either:

(a) Proceed on the assumption that the project is a public work and ensure that:

1. prevailing wages are paid; and
2. the project budget for labor reflects these prevailing wage requirements; and
3. the project complies with all other requirements of prevailing wage law including but not limited to keeping accurate payroll records, and complying with all working hour requirements and apprenticeship obligations;

or,

(b) Timely obtain a legally binding determination from the Department of Industrial Relations or a court of competent jurisdiction before work begins on the project that the proposed project is not a public work.

1. California Environmental Quality Act (CEQA) Compliance Form (Attachment 7)

The CEC requires the information on this form to facilitate its evaluation of proposed activities under CEQA (California Public Resources Code Section 21000 et. seq.), a law that requires state and local agencies in California to assess the potential environmental impacts of their proposed actions. The form will also help applicants to determine CEQA compliance obligations by identifying which proposed activities may be exempt from CEQA and which activities may require additional environmental review. If proposed activities are exempt from CEQA (such as paper studies), the worksheet will help to identify and document this. This form must be completed regardless of whether the proposed activities are considered a “project” under CEQA.

Failure to complete the CEQA process in a timely manner after the CEC’s NOPA may result in the cancellation of a proposed award and allocation of funding elsewhere, such as to the next highest-scoring project.

1. Reference and Work Product Form (Attachment 8)
	* 1. Section 1: Provide applicant and subrecipients references as instructed.
		2. Section 2: Provide a list of past projects detailing technical and business experience

of the applicant (or any member of the project team) that is related to the proposed work. Identify past projects that resulted in market-ready technology, advancement of codes and standards, and/or advancement of state energy policy. Include copies of up to three of the applicant or team member’s recent publications in scientific or technical journals related to the proposed project, as applicable.

1. Commitment and Support Letter Form (Attachment 9)

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. Commitment and Support Letters must be submitted with the application. Letters that are not submitted by the application deadline will not be reviewed and counted towards meeting the requirement specified in the solicitation.

1. Commitment Letters

Applicants must submit a **match funding** commitment letter signedby eachrepresentative of the entity or individual that is committing to providing match funding. The letter should: (1) identify the source(s) of the funds; and (2) guarantee the availability of the funds for the project.

* If the project involves **demonstration** activities, the applicant must include a site commitment letter signed by an authorized representative of the proposed demonstration site. The letter must: (1) identify the location of the site (street address, parcel number, tract map, plot map, etc.) which must be consistent with Attachments 1 and 8. and (2) commit to providing the site for the proposed activities.
* **Project partners** that are making contributions other than match funding or a demonstration site, and are not receiving CEC funds, must submit a commitment letter signed by an authorized representative that: (1) identifies how the partner will contribute to the project; and (2) commits to making the contribution.
1. Support Letters

All applicants must include at least one support letter from a project stakeholder (i.e., an entity or individual that will benefit from or be involved in the project) that: (1) describes the stakeholder’s interest or involvement in the project; (2) indicates the extent to which the project has the support of the relevant industry and/or organizations; and (3) describes any support it intends (but does not necessarily commit) to provide for the project, such as funding or the provision of a demonstration site.

The CEC may have waived the requirement for a signature on application materials for this solicitation. If a notice regarding CEC’s waiver of the signature requirement appears here: https://www.energy.ca.gov/funding-opportunities/solicitations, the waiver applies to this solicitation. In the event of a conflict between the notice and any language in this solicitation regarding signatures, the notice will govern.

1. Project Performance Metrics (Attachment 10)

The purpose of this questionnaire is to identify and document 5-7 performance targets for the project. The performance targets should be a combination of scientific, engineering and techno-economic metrics that provide the most significant indicator of the research or technology’s potential success.

1. Applicant Declaration (Attachment 11)

This form requests the applicant declare that they: are not delinquent on taxes nor suspended by the California Franchise Tax Board; are not being sued by any public agency or entity; are in compliance with the terms of all settlement agreements, if any, entered into with the Energy Commission or another public agency or entity; are in compliance with all judgments, if any, issued against the Applicant in any matter to which the Energy Commission or another public agency or entity is a party; are complying with any demand letter made on the Applicant by the Energy Commission or another public agency or entity; and are not in active litigation with the Energy Commission regarding the Applicant’s actions under a current or past contract, grant, or loan with the Energy Commission. The declaration must be signed under penalty of perjury by an authorized representative of the applicant’s organization.

The CEC may have waived the requirement for a signature on application materials for this solicitation. If a notice regarding CEC’s waiver of the signature requirement appears here: https://www.energy.ca.gov/funding-opportunities/solicitations, the waiver applies to this solicitation. In the event of a conflict between the notice and any language in this solicitation regarding signatures, the notice will govern.

1. California Based Entity (CBE) Form (Attachment 12)

Identify any CBEs as instructed in the form. CBEs are entitled to a scoring preference as described in Part IV of this solicitation.

1. Appendix G from CEQA Handbook (Attachment 13)

Applicants may use this attachment as a reference guide for projects to complete CEQA compliance form (Attachment 7). The Environmental Checklist Form included in Attachment 13 is not required for application submission.

# IV. Evaluation and Award Process

## Application Evaluation

Applications will be evaluated and scored based on responses to the information requested in this solicitation and on any other information available, such as on past performance of CEC agreements. To evaluate applications, the CEC will organize an Evaluation Committee that consists primarily of CEC staff. The Evaluation Committee may use technical expert reviewers to provide an analysis of applications. Applications will be evaluated in two stages:

1. **Stage One: Application Screening**

The Contracts, Grants, and Loans Office and/or the Evaluation Committee will screen applications for compliance with the Screening Criteria in **Section E** of this Part. **Applications that fail any of the screening criteria will be rejected.**The Evaluation Committee may conduct optional telephone **Clarification Interviews** with applicants during the screening process to clarify and/or verify information submitted in the application. However, these interviews may not be used to change or add to the content of the original application. Applicants will not be reimbursed for time spent answering clarifying questions.

1. **Stage Two: Application Scoring**

Applications that pass Stage One will be submitted to the Evaluation Committee for review and scoring based on the Scoring Criteria in **Section F** of this Part.

* The scores for each application will be the average of the combined scores of all Evaluation Committee members.
* Clarification Interviews: The Evaluation Committee may conduct optional telephone interviews with applicants during the evaluation process to clarify and/or verify information submitted in the application. However, these interviews may not be used to change or add to the content of the original application. Applicants will not be reimbursed for time spent answering clarifying questions.
* **A minimum score of 70.0 points** is required for criteria 1-7- to be eligible for funding. In addition, the application must receive a minimum score of **52.50 points for criteria 1−4** to be eligible for funding.

## Ranking, Notice of Proposed Award, and Agreement Development

1. **Ranking and Notice of Proposed Award**

Applications that receive at least the minimum required score for all criteria will be ranked according to their score.

* CEC staff will post a **NOPA** that includes: (1) the total proposed funding amount; (2) the rank order of applicants; and (3) the amount of each proposed award. The CEC will post the NOPA on its website and will e-mail it to all entities that submitted an application. Proposed awards must be approved by the CEC at a business meeting.
* **Debriefings:** Unsuccessful applicants may request a debriefing after the release of the NOPA by contacting the CAO listed in Part I. A request for debriefing must be received **no later than 30 calendar days** after the NOPA is released.
* In addition to any of its other rights, the CEC reserves the right to:
	+ Allocate any additional funds to passing applications, in rank order; and
	+ Negotiate with successful applicantstomodify the project scope, schedule, project team entity that will receive the award, location and/or level of funding.
1. **Agreements**

Applications recommended for funding will be developed into a proposed grant agreement to be considered at a CEC Business Meeting. Recipients may begin the project only after full execution of the grant agreement (i.e., approval at a CEC business meeting and signature by the Recipient and the CEC).

* **Agreement Development:** The Contracts, Grants, and Loans Office will send the Recipient a grant agreement for approval and signature. The agreement will include the applicable terms and conditions and will incorporate this solicitation and the application by reference. The CEC reserves the right to modify the award documents (including the terms and conditions) prior to executing any agreement.
* **Failure to Execute an Agreement:** If the CEC is unable to successfully execute an agreement with an applicant in a timely manner, it reserves the right to cancel the pending award and use the funds elsewhere, such as to fund the next highest-ranked, eligible application.

## Grounds to Reject an Application or Cancel an Award

Applications that do not pass the screening stage will be rejected. In addition, the CEC reserves the right to reject an application and/or to cancel an award for any reason, including any of the following:

* The application contains false or intentionally misleading statements or references that do not support an attribute or condition contended by the applicant.
* The application is intended to erroneously and fallaciously mislead the State in any way.
* The application does not comply or contains caveats that conflict with the solicitation, and the variation or deviation is material.
* The applicant has previously received funding through an EPIC or Gas R&D (formerly Public Interest Energy Research (PIER)) agreement, has received the royalty review letter (which the CEC annually sends out to remind past recipients of their obligations to pay royalties), and has not responded to the letter or is otherwise not in compliance with repaying royalties.
* The applicant has received unsatisfactory agreement evaluations from the CEC or another California state agency.
* The applicant is a business entity required to be registered with the California Secretary of State and is not in good standing.
* The applicant has not demonstrated that it has the financial capability to complete the project.
* The applicant fails to meet CEQA compliance within sufficient time for the CEC to meet its encumbrance deadline or any other deadlines, as the CEC in its sole and absolute discretion may determine.
* The applicant has included a statement or otherwise indicated that it will not accept the terms and conditions, or that acceptance is based on modifications to the terms and conditions. If an applicant, by law, cannot agree to certain terms and conditions, the applicant can request a modification. This modification may be negotiated if the applicant is proposed for award. The CEC retains the sole right to refuse to agree to any requested modifications
* The application contains confidential information or identifies any portion of the application as confidential.

## Miscellaneous

1. **Solicitation Cancellation and Amendment**

It is the policy of the CEC not to solicit applications unless there is a bona fide intention to award an agreement. However, if it is in the State’s best interest, the CEC reserves the right, in addition to any other rights it has, to do any of the following:

* Cancel this solicitation;
* Revise the amount of funds available under this solicitation;
* Amend this solicitation as needed; and/or
* Reject any or all applications received in response to this solicitation.

If the solicitation is amended, the CEC will send an addendum to all entities that requested the solicitation and will also post it on the CEC’s website at: https://www.energy.ca.gov/funding-opportunities/solicitations. The CEC will not reimburse applicants for application development expenses under any circumstances, including cancellation of the solicitation.

1. **Modification or Withdrawal of Application**

Applicants may recall or modify a submitted application within ECAMS before the deadline to submit applications. Applications cannot be changed after that date and time. An application cannot be “timed” to expire on a specific date. For example, a statement such as the following is non-responsive to the solicitation: “This application and the cost estimate are valid for 60 days.” **Confidentiality**

Though the entire evaluation process from receipt of applications up to the posting of the NOPA is confidential, **all submitted documents will become publicly available records** after the CEC posts the NOPA or the solicitation is cancelled. **The CEC will not accept or retain applications that identify any portion as confidential.**

1. **Solicitation Errors**

If an applicant discovers any ambiguity, conflict, discrepancy, omission, or other error in the solicitation, the applicant should immediately notify the CEC of the error in writing and request modification or clarification of the solicitation. The CEC will provide modifications or clarifications by written notice to all entities that requested the solicitation. The CEC will not be responsible for failure to correct errors.

1. **Immaterial Defect**

The CEC may waive any immaterial defect or deviation contained in an application. The CEC’s waiver will not modify the application or excuse the successful applicant from full compliance with solicitation requirements.

1. **Disposition of Applicant’s Documents**

Upon the posting of the NOPA, all applications and related materials submitted in response to this solicitation will become property of the State and publicly available records. Unsuccessful applicants who seek the return of any materials must make this request to the Agreement Officer listed in Part I and provide sufficient postage to fund the cost of returning the materials.

1. **Opportunity to Cure Administrative Errors**

The CEC understands and appreciates the significant time and expense applicants spend preparing applications.  An administrative error that prevents an applicant from submitting a complete application frustrates both the CEC and applicants.  The purpose of this process is to reduce the number of applications screened out or receiving a significantly reduced score for administrative errors while maintaining a fair competition.  This process also ensures better competition and thus better projects to benefit California.

After the application deadline, an applicant might identify, or the Evaluation Committee may find what reasonably appears to be, an administrative error.  For purposes of this solicitation only, an administrative error is defined as an applicant’s inadvertent mistake that prevents materials in existence as of the application deadline from appearing in its submitted application.  Examples include, but are not limited to, accidentally:

* Scanning and submitting every other page in a document instead of every page.
* Submitting the wrong document.
* Leaving out a document.

If the Evaluation Committee find what reasonably appears to be an administrative error, they can communicate with the applicant to confirm.  If an applicant finds an administrative error in its application, it should immediately contact the Commission Agreement Officer listed in the “Contact Information/Questions” section of this solicitation.

If an administrative error has been identified and communicated to the CAO, the CEC may, but is not required to, allow the applicant a period of time to provide the missing materials.  Reasons why the CEC might NOT allow an applicant to fix an administrative error include, but are not limited to:

* The funds have a deadline that does not allow time to fix the error.
* The application has been screened out or does not receive a passing score for reasons unrelated to the administrative error, making irrelevant any efforts to fix the error.
* The applicant brings the error to the CEC’s attention too late in the solicitation process (e.g., after awards have been approved at a Business Meeting).

If the Evaluation Committee allows an applicant the opportunity to fix an administrative error, the CAO will communicate in writing to the applicant’s project manager listed the deadline by which the applicant must provide the missing materials.  Reasonable efforts will be made to confirm receipt of the notice, but actual notice cannot be guaranteed, and the obligation is on the applicant to ensure the proper contact(s) are listed and available to respond.  The Evaluation Committee will not consider any materials submitted after the deadline.

This process only allows applicants to submit materials in existence as of the application deadline.  This process does NOT allow applicants to submit material created or modified after the application deadline. The CEC has sole discretion to determine whether materials submitted are eligible for consideration by the Evaluation Committee under this opportunity to cure.

Applicants must include the following certification along with the materials it submits to fix an administrative error and must explain why the materials were not provided due to an inadvertent administrative error:

“I certify on behalf of the applicant that the materials provided herein existed at the time of the application deadline, have not been modified since, and were not originally provided due to an inadvertent administrative error as described herein.”

The Evaluation Committee is not responsible for finding, or communicating with the applicant about, any errors in an application.  Applicants remain solely responsible for submitting applications, including any material submitted to fix an administrative error, that meet all solicitation requirements.

## Stage One: Application Screening

| **Screening Criteria** *The Application must pass ALL criteria to progress to Stage Two.* | **Pass/Fail** |
| --- | --- |
| 1. The application is received by the CEC’s Contracts, Grants, and Loans Office by the due date and time specified in the “Key Activities Schedule” in Part I of this solicitation and is received in the required manner (e.g., no emails or faxes).
 | [ ]  Pass [ ]  Fail |
| 1. The application addresses only one of the eligible project groups, as indicated by the information the Applicant enters into the ECAMS system.
 | [ ]  Pass [ ]  Fail |
| 1. If the applicant has submitted more than one application for the same project group, each application is for a distinct project (i.e., no overlap with respect to the tasks described in the Scope of Work, Attachment).

*If the projects are not distinct and the applications were submitted at the same time, only the first application screened by the CEC will be eligible for funding. If the applications were submitted separately, only the first application received by the CEC will be eligible for funding.* | [ ]  Pass [ ]  Fail |
| 1. ***Group 2 only***: the Application includes Commitment Letters that total the minimum of 20% in match share of the total requested CEC funds.
 | [ ]  Pass [ ]  Fail |

The CEC may have waived the requirement for a signature on application materials for this solicitation. If a notice regarding CEC’s waiver of the signature requirement appears here: https://www.energy.ca.gov/funding-opportunities/solicitations, the waiver applies to this solicitation. In the event of a conflict between the notice and any language in this solicitation regarding signatures, the notice will govern.

**Additional Screening Criteria for Past Performance**

|  |  |
| --- | --- |
| **Screening Criteria** |  |
| **Applicant Past Performance with CEC**The applicant—defined as at least one of the following: the business, principal investigator, or lead individual acting on behalf of themselves—received funds from the CEC (e.g., contract, grant, or loan) and entered into an agreement(s) with the CEC and demonstrated **severe performance issues** characterized by significant negative outcomes including:* Significant deviation from agreement requirements;
* Termination with cause;
* Demonstrated poor communication, project management, and/or inability, due to circumstances within its control, from materially completing the project;
* Quality issues with deliverables including poorly written final report that prevents publishing
* Severe unresolved negative audit findings.
 |  |
| **Must pass to continue with Scoring Criteria** | **Pass/Fail** |

## Stage Two: Application Scoring

Proposals that pass ALL Stage One Screening Criteria and are not rejected as described in Section IV.C. will be evaluated based on the Scoring Criteria on the next page and the Scoring Scale below (with the exception of criteria 6−9, which will be evaluated as described in each criterion). Each criterion has an assigned number of possible points and is divided into multiple sub-criteria. The sub-criteria are not equally weighted. The Project Narrative (Attachment) must respond to each sub-criterion, unless otherwise indicated.

**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. |
| 75% | Between Adequate and Good | Response better than 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. |
| 85% | Between Good and Excellent | Response fully addresses the requirements being scored with a better than 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. |
| 95% | Between Excellent and Exceptional | Response fully addresses the requirements being scored with a better than excellent 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. |

|  |
| --- |
| **Scoring CRITERIA****The Project Narrative (Attachment)** must respond to each criterion below. The responses must directly relate to the solicitation requirements and focus as stated in the solicitation.  |

| **Scoring Criteria** | **Maximum Points** |
| --- | --- |
| 1. **Technical Merit**
2. The proposed project provides a clear and concise description of the technological, scientific knowledge advancement, and/or innovation that will overcome barriers to achieving the State’s statutory energy goals.
3. Describes the competitive advantages of the proposed technology over state-of-the-art (e.g., efficiency, emissions, durability, cost).
4. Provides the proposed technical specifications and describe how the project will meet or exceed the technical specifications by the end of the project.
5. Describes the TRL the proposed technology has achieved and the expected TRL by the end of the project.
6. Describes at what scale the technology has been successfully demonstrated, including size or capacity, number of previous installations, location and duration, results, etc.
7. Describes how the proposed demonstration will lead to increased adoption of the technology in California.
8. Provides information described in Section I.C.
 | **15** |
| 1. **Technical Approach**
2. Proposal describes the technique, approach, and methods to be used in performing the work described in the Scope of Work.
3. The Scope of Work identifies goals, objectives, and deliverables, details the work to be performed, and aligns with the information presented in Project Narrative.
4. Proposal identifies the reliability that the project and site recommendations as described will be carried out if funds are awarded.
5. Identifies and discusses factors critical for success, in addition to risks, barriers, and limitations (e.g. loss of demonstration site, key subrecipients). Provides a plan to address them.
6. Discusses the degree to which the proposed work is technically feasible and achievable within the proposed Project Schedule and the key activities schedule in Section I.E.
7. Describes the technology transfer plan to assess and advance the commercial viability of the technology.
8. Provides a clear and plausible measurement and verification plan that describes how energy savings and other benefits specified in the application will be determined and measured.
9. Provides information documenting progress towards achieving compliance with the CEQA by addressing the areas in Section I.I and Section III.C.7.
10. Provides information described in Section I.C.
 | **25** |
| 1. **Impacts and Benefits for California IOU Ratepayers**
2. Explains how the proposed project will benefit California Gas IOU ratepayers and provides clear, plausible, and justifiable (quantitative preferred) potential benefits. Estimates the energy benefits including:
	* quantifiable thermal energy savings from reduced gas use in operations and product development over the course of the project, and projected reduction in gas use from replacing incumbent products with proposed CO2-based products.
3. States the timeframe, assumptions with sources, and calculations for the estimated benefits, and explains their reasonableness. Include baseline or “business as usual” over timeframe.
4. Explains the path-to-market strategy including near-term (i.e. initial target markets), mid-term, and long-term markets for the technology, size and penetration or deployment rates, and underlying assumptions.
5. Identifies the expected financial performance (e.g. payback period, ROI) of the demonstration at scale.
6. Identifies the specific programs the technology intends to leverage.
7. Provides information described in Section I.C.
 | **20** |
| 1. **Team Qualifications, Capabilities, and Resources**

Evaluations of ongoing or previous projects including project performance by applicant and team members will be used in scoring for this criterion. This can include contacting references.1. Identifies credentials of prime and any subrecipients key personnel, including the project manager, principal investigator and technology and knowledge transfer lead *(include this information in the Project Team Form).*
2. Demonstrates that the project team has appropriate qualifications, experience, financial stability and capability to complete the project.
3. Explains the team structure and how various tasks will be managed and coordinated.
4. Describes the facilities, infrastructure, and resources available that directly support the project.
5. Describes the team’s history of successfully completing projects in the past 10 years including subsequent deployments and commercialization.
 | **15** |
| **Total Possible Points for criteria 1− 4****(Minimum Passing Score for criteria 1− 4 is 70% or 52.50)** | **75** |
| 1. **Budget and Cost-Effectiveness**
2. Budget forms are complete for the applicant and all subrecipients, as described in the Budget instructions.
3. Justifies the reasonableness of the requested funds relative to the project goals, objectives, and tasks.
4. Justifies the reasonableness of direct costs (e.g., labor, fringe benefits, equipment, materials & misc. travel, and subrecipients).
5. Justifies the reasonableness of indirect costs (e.g., overhead, facility charges (e.g., rent, utilities), burdens, subrecipients profit, and other like costs).
 | **10** |
| 1. **CEC Funds Spent in California**

Projects that maximize the spending of CEC funds in California will receive points as indicated in the table below (see CEC Funds Spent in California and CBEs section for more details).

|  |  |
| --- | --- |
| **Percentage of CEC funds spent in CA vs Total CEC funds requested**(derived from budget Attachment) | **Percentage of Possible Points** |
| >60%  | 20% |
| >65%  | 30% |
| >70% | 40% |
| >75%  | 50% |
| >80% | 60% |
| >85%  | 70% |
| >90% | 80% |
| >95%  | 90% |
| >98% | 100% |

 | **10** |
| 1. **Ratio of Direct Labor to Indirect Costs**

The score for this criterion will be calculated by the following formula:$$\frac{Total Direct Labor}{Total Direct Labor + Total Fringe + Total Indirect + Total Profit}$$This ratio will then be multiplied by the maximum possible points for this criterion and rounded to two decimal places.NOTE: For the purposes of this criterion, the CEC will include the facility charges (e.g., rent, utilities, etc.), burdens and other like costs that are budgeted as direct costs into the indirect costs in the formula. | **5** |
| **Total Possible Points****(Minimum Passing Score for Criteria 1 – 7 is 70% or 70.00)** | **100** |

| **Scoring Criteria** | **Maximum Points** |
| --- | --- |

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

Projects that maximize the spending of CEC funds on CBEs will receive points as indicated in the table below (see Funds Spent in California and CBEs section for more details). Projects that meet these requirements will receive preference points as indicated below:

|  |  |
| --- | --- |
| **Percentage of Gas R&D Funds Allocated to CBEs**(derived from budget attachment “Category Budget”) | **Percentage of Possible Points** |
| > 60% | 20% |
| > 70%  | 40% |
| > 80%  | 60% |
| > 90%  | 80% |
| =100% | 100% |

 | **5** |
| 1. **Match Funds**
2. Cash match share is preferred; however, in-kind cost share is permitted and will be considered for solicitation match requirements. Points for this criterion will be evaluated based on the proposed cash match relative to the total match (cash + in-kind) contributions using the Cash Match Scoring Table:

**Cash Match Scoring Table**

| Percentage of Proposed Cash Match Funds | Score |
| --- | --- |
| 80 to 100% | 5 |
| 60 to <80% | 4 |
| 40 to <60% | 3 |
| 20 to <40% | 2 |
| 10 to <20% | 1 |

 | **5** |
| 1. Additional points will be awarded to applications that exceed the minimum match requirements based on the percentage amount above minimum using the Exceeds Minimum Match Scoring table:

**Exceeds Minimum Match Scoring Table**

| Percentage above Minimum Match (cash and in-kind) | Score |
| --- | --- |
| $\geq $ 80% | 5 |
| 60 to <80% | 4 |
| 40 to <60% | 3 |
| 20 to <40% | 2 |
| 10 to <20 % | 1 |

  | **5** |
| 1. ***Group 2 only***: **Disadvantaged & Low-Income Communities and/or Tribes**

In order to receive or qualify for additional points, the proposed project must demonstrate benefits to the disadvantaged and/or low-income community and/or tribes in order to receive additional points. 1. Proposal identifies how the target market(s) will benefit disadvantaged and/or low-income communities and/or tribes.
2. Identifies economic impact on low-income and disadvantaged communities and/or tribes including customer bill savings, job creation, partnering and contracting with micro- and small-businesses, and economic development.
3. Describes how the project will increase access to clean energy or sustainability technologies within disadvantaged and/or low-income communities and/or tribes and how the development will benefit the communities.
4. Applicants have letters of support from technology partners, community-based organizations, environmental justice organizations, or other partners that demonstrate their belief that the proposed project will lead to increased equity, and is both feasible, and commercially viable in the identified low-income and/or disadvantaged communities and/or tribes.
 | **5** |

1. Pacific Standard Time or Pacific Daylight Time, whichever is being observed. [↑](#footnote-ref-2)
2. This deadline does not apply to non-technical questions (e.g., administrative questions concerning application format requirements or attachment instructions) including questions regarding application submission in the ECAMS system or to questions that address an ambiguity, conflict, discrepancy, omission, or other error in the solicitation. Such questions may be submitted to the CAO listed in Section G at any time prior to 5:00 p.m. of the application deadline. Please see Section G for additional information. [↑](#footnote-ref-3)
3. See Public Resources Code section 25620 https://leginfo.legislature.ca.gov/faces/codes\_displayText.xhtml?lawCode=PRC&division=15.&title=&part=&chapter=7.1.&article= [↑](#footnote-ref-4)
4. See CPUC Decision 04-08-010, August 19, 2004, http://docs.cpuc.ca.gov/PublishedDocs/WORD\_PDF/FINAL\_DECISION/39314.PDF [↑](#footnote-ref-5)
5. *Id.* at pp. 25 and 46. [↑](#footnote-ref-6)
6. 2019. *The Natural Gas Research Development and Demonstration Program: Proposed Program Plan and Funding Request for Fiscal Year 2021-22*. California Energy Commission. Natural Gas Research and Development Program, Proposed Budget Plan for Fiscal Year 2021-22 | California Energy Commission [↑](#footnote-ref-7)
7. AB 1279 (Muratsuchi, Chapter 337, Statutes of 2022) [↑](#footnote-ref-8)
8. SB 905 (Caballero, Chapter 359, Statutes of 2022) [↑](#footnote-ref-9)
9. AB 209 (Chapter 251, Statutes of 2022) [↑](#footnote-ref-10)
10. AB 32 (Statutes of 2006, chapter 488) [↑](#footnote-ref-11)
11. “Key personnel” are individuals that are critical to the project due to their experience, knowledge, and/or capabilities. [↑](#footnote-ref-12)