**GRANT FUNDING OPPORTUNITY**

**Development of a Data-Driven Tool to Support Strategic and Equitable Decommissioning of Gas Infrastructure**

**PIER Natural Gas Program**



**GFO-21-504**

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

**State of California**

**California Energy Commission**

November 2021

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# I. Introduction

## Purpose of Solicitation

The purpose of this solicitation is to fund an energy-related environmental research project under the following Natural Gas Research and Development (R&D) Program initiative:

* Development of a Data-Driven, Actionable Tool and Case Studies to Support the Strategic and Equitable Natural Gas Decommissioning

The role of natural gas in California’s energy system is changing as the state strives toward a clean energy future. Over the next 25 years, state and municipal laws concerning greenhouse gas (GHG) emission reductions will result in the replacement of gas-fueled technologies and will reduce the demand for fossil natural gas (CPUC, 2020). Without proper management, these transitions will impose challenges not only to customer affordability, but also to gas system planning, operations and maintenance, and safety.

The data-driven tool developed under this solicitation will provide state agencies, local governments, investor-owned utilities (IOUs), and other stakeholders with valuable information for assessing the technical and economic feasibility of, and other issues related to, decommissioning specific segments of the gas system. This includes a greater understanding of possible strategic decommissioning pathways to complement emission reductions, avoiding unsustainable large cost burdens for ratepayers, ensuring that the safety of the gas system is not compromised, and enhancing the capacity of state agencies, IOUs, local governments, and other stakeholders to collaboratively plan and develop policy for the gas system in California’s low-carbon future by identifying promising sites for decommissioning gas infrastructure.

The state has committed to achieve 100 percent retail sales of carbon-free electricity by 2045 and 60 percent renewable electricity by 2030 in signing Senate Bill (SB) 100. SB 32 also sets a goal of achieving economy wide GHG emission reductions of 40 percent below 1990 levels by 2030. Further ambitious targets have been established via executive order including achieving carbon neutrality by 2045, and under direction from Governor Newsom, the California Air Resources Board (CARB) is evaluating pathways to accelerate the state’s carbon neutrality goal to 2035, a full decade ahead of the current target (Office of Governor, 2021).

To meet these ambitious goals, studies have indicated a need for large reductions in fossil natural gas consumption in residential and commercial buildings (Mahone, et al. 2018; Gridworks, 2019; Wei, et al, 2017; Aas, et al. 2020). Assembly Bill (AB) 3232 required the California Energy Commission (CEC) to assess how California might reduce GHG emissions from the state’s residential and commercial building stock by at least 40 percent below 1990 levels by January 1, 2030. CEC’s resulting California Building Decarbonization Assessment finds that “accelerating efficient electrification of building end uses in both new and existing buildings represents the most predictable pathway to achieve deep reductions in building emissions” (Kenney, et al. 2021). Similarly, a CEC-funded report by Energy and Environmental Economics, Inc (E3), *The Challenge of Retail Gas in California’s Low-Carbon Future* (2020), explored the implications of a low-carbon future on the state’s retail natural gas system (Aas, et al. 2020). It reaffirms prior studies’ finding that electrification appears to be the lowest-cost trajectory to meeting the state’s climate change mitigation goals, and further concludes that a managed gas transition is imperative to address issues related to equity and costs.

The CEC’s 2022 update to California’s Building Energy Efficiency Standards for new construction, additions, and alterations of residential and nonresidential buildings (Title 24) encourages greater use of electric heat pump technologies in residential and select non-residential building categories statewide (CEC, 2021c). A growing number of California cities are also adopting and implementing local building codes that mandate or encourage building electrification in new construction and major retrofits.

The prospect of significant reductions in retail customer demand for natural gas creates a planning imperative. With fewer customers and less natural gas demand, the cost of natural gas for remaining retail customers is expected to rise and could become unsustainable, particularly for low-income customers, unless system costs that are recovered through rates can also be reduced over time (Gridworks, 2019; Aas, et al. 2020). The growing body of literature on the future of California’s gas system affirms the complexity of crafting a managed transition that addresses multiple stakeholder concerns, but also offers insights into the many paths forward for innovative solutions (Bilich, et al. 2019; Gridworks, 2019; The Greenlining Institute, 2019; Ong, Mastrandrea and Wara, 2021).

There is a need to collaboratively chart a strategic transition that manages cost-effectiveness, equity issues, and safety. In response to past and prospective events that will require regulatory changes for natural gas utilities, the California Public Utilities Commission (CPUC) issued Rulemaking R.20-01-007 in 2020. This rulemaking will establish policies, processes, and rules to ensure safe and reliable gas systems in California and will advance long-term gas system planning (CPUC, 2020).

The changing role of natural gas underscores the need to strategically identify promising sites for decommissioning gas system infrastructure, while also updating gas system planning and regulatory accounting mechanisms to mitigate stranded costs for utilities and maintain affordable gas rates for customers. The CEC’s Natural Gas R&D Program aims to provide applied research that will help address these challenges. Ongoing research agreements supported by the CEC will conduct targeted decommissioning pilots (including development of criteria for decommissioning site identification) in northern California and in southern California and produce a long-term natural gas research strategy (California Energy Commission, 2021a).

The purpose of this solicitation is to extend and complement these ongoing efforts by developing a data-driven tool for systematic identification of promising decommissioning sites, enhancing the capacity of state agencies, IOUs, local governments, and other stakeholders to collaboratively plan and develop policy for the gas system in California’s low-carbon future. The data-driven tool developed for this solicitation will leverage detailed data on IOU natural gas infrastructure (and co-located electricity system infrastructure) to provide a systematic framework for identifying promising sites for decommissioning of retail gas system infrastructure. The framework for site identification will be informed by evaluation of criteria derived from CEC’s ongoing research, along with key criteria from other relevant pilot projects, recent research, and decommissioning efforts.

This solicitation complements the CEC’s efforts to increase understanding of the characteristics and condition of California’s natural gas system, as well as efforts underway at CPUC. These efforts include data collection for the 2021 Integrated Energy Policy Report (IEPR) proceeding (CEC 2021b), Title 20 regulations for IOUs to submit hydraulic models (and data), and CPUC’s Long-Term Gas Planning Rulemaking (R.20-01-007).

The tool will enable regional analysis that screens for promising sites based on the condition and characteristics of physical assets – after which local feasibility of decommissioning can be considered through more detailed analysis. The results from the data-driven tool are expected to inform a proposed initiative under the Fiscal Year (FY) 2021-2022 Natural Gas R&D Program budget plan: Location-Specific Analysis of Decommissioning to Support Long-Term Gas Planning. The proposed FY2021-2022 initiative on location-specific analysis will leverage the outputs of the data-driven tool. Specifically, this follow-on analysis will examine the technical feasibility of decommissioning specific segments of the gas system based on analysis of the operational implications and practical implementation of decommissioning (CEC, Proposed 2021). The operational and practical implementation perspective of the proposed FY 2021-2022 initiative will provide a crucial complement to the physical asset focus of the data-driven tool. The outputs from the data-driven tool will also help identify specific barriers to decommissioning in low-income and disadvantaged communities, so that the proposed FY 2021-2022 initiative can prioritize opportunities for examining gas infrastructure decommissioning and electrification in low-income and disadvantaged communities.

To ensure opportunity for stakeholder input regarding the scope and organization of this solicitation, CEC staff held a staff workshop on July 12, 2021, to present initial ideas and elicit input. CEC appreciates the participation of approximately 50 attendees, including representation from IOUs, state agencies, industry, research institutes, and private consultants. Links to the workshop materials, including the presentation and recording, are available in the “Reference documents” section of this solicitation manual.

Projects must fall within the following project group:

* **Group 1**: Data-Driven Tool to Support Strategic and Equitable Decommissioning of Gas Infrastructure

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’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. |
| Authorized Representative | *Authorized Representative*, the person signing the application form who has authority to enter into an agreement with the CEC. |
| 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 |
| CARB | California Air Resources Board |
| CBE | California Based Entity |
| CBO | 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. |
| CEC | State Energy Resources Conservation and Development Commission or , the California Energy Commission. |
| CEQA | California Environmental Quality Act, California Public Resources Code Section 21000 et seq. |
| CPUC | California Public Utilities Commission |
| Days | *Days refers to calendar days.* |
| Disadvantaged Community | These are communities in the top 25% scoring areas from CalEnviroScreen along with other areas with high amounts of pollution and low populations.  (https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30) |
| FY | Fiscal Year |
| GHG | Greenhouse Gas |
| IEPR | Integrated Energy Policy Report |
| Low Income Community | 1. *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) |
| NG IOU | *Natural Gas Investor-owned utility,* including Pacific Gas and Electric Co., San Diego Gas and Electric Co., and Southern California Gas Co. |
| 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. |
| R&D | Research and Development |
| Recipient | An entity receiving an award under this solicitation. |
| 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”). |
| 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> |

## Project Focus

* **Group 1: Data-Driven Tool to Support Strategic and Equitable Decommissioning of Gas Infrastructure**

Research funded by this solicitation will develop a data-driven tool in support of efforts to collaboratively chart a strategic transition of the retail natural gas system. The CEC seeks to fund research that leverages detailed data on IOUs’ retail gas system infrastructure and, to the extent possible, co-located electricity system infrastructure in order to:

* + Support more open and collaborative discussions among state agencies, IOUs, and other stakeholders regarding decommissioning options and impacts within the retail gas system.
  + Provide comprehensive geographical coverage, with a preference for statewide coverage over coverage that is limited to a single IOU service territory.

The successful applicant **must demonstrate**:

* A skilled, well-resourced management team to ensure coordination in leveraging gas system data and related criteria from IOUs, CEC, CPUC and other efforts.
* A clearly articulated approach to engagement of IOUs, CEC, CPUC and other key stakeholders to:
  + access useful data and criteria,
  + conduct an inclusive process to inform criteria selection and tool development, and
  + leverage in-depth expertise and understanding of gas system infrastructure.
* A clearly articulated approach to data management and demonstrated ability to protect any sensitive and confidential information received.

**Projects in this group must, at a minimum:**

1. **Collect detailed data** about California’s retail gas system. This must include geographically disaggregated technical and economic data of relevance for decommissioning of segments of the retail gas system, such as data about the condition, characteristics, and value of infrastructure assets; planned maintenance and safety investments; number and type of customers served; gas throughput; and decommissioning costs.
2. **Provide a systematic framework** for identifying promising sites for decommissioning. This framework will:
   1. Incorporate criteria that address, but are not limited to, cost-effectiveness, safety, socioeconomic factors, and equity.
   2. Include criteria concerning the gas system infrastructure, as well as the co-located electricity system infrastructure.
   3. Develop criteria in a manner that is informed by early pilot projects, recent research, and stakeholder engagement.
3. **Implement the systematic framework described in item 2, above, in the form of a data-driven tool** that enables screening for promising sites for decommissioning as a first step for prioritizing more targeted analyses of the technical feasibility of decommissioning specific segments of the gas system. The tool will:
   1. Provide detailed insight into which geographic segments of the retail gas system may be promising candidates for decommissioning, under which circumstances and within which time horizons. Interpretation of results is expected to leverage deep expertise, including knowledge from key stakeholders and project partners.
   2. Demonstrate how the outputs relate to, or illuminate, existing metrics such as those used by IOUs, the CPUC, and other key stakeholders.
   3. Deliver and present screening results in an interactive interface that enables exploration of issues germane to decommissioning.
   4. Support flexible analyses to preferentially select, de-select or differentially weigh site identification criteria, time horizons, and policy options.
4. **Deliver publicly available products that present criteria and insights derived from application of the data driven tool.** These products will:
   1. Protect confidential and sensitive information related to the data-driven tool.
   2. Consider potential impacts of strategic decommissioning on addressing issues of concern, such as system cost, maintenance requirements, throughput, and avoided emissions.

Additional considerations:

1. Confidentiality and Security. As described in the Project Focus, above, it is anticipated that the research team may be provided with data. This data could include information developed by CEC submitted to CEC from the CPUC or IOUs. This data may relate to the State’s natural gas infrastructure or its rate payers as part of the data collection for the data-driven tool. The research team must protect the confidentiality of such data. In accordance with the PIER Natural Gas Grant terms and conditions, all individuals employed by recipient or a subrecipient who will receive confidential data will (1) need to execute a non-disclosure agreement (see the sample NDA in Attachment 14) and (2) be required to properly handle and keep safe any confidential information received. The Recipient will also need to identify all products (or information contained within products) created for this grant agreement that it considers to be confidential, in addition to the legal basis for confidentiality, in Attachment 1 to the PIER Natural Gas Grant terms and conditions, which will be part of the final grant agreement..
2. Data Collection Efforts. The focus of data collection efforts by the research team should be on California’s retail gas system, as specified above. It is anticipated, however, that data about the condition and technical and economic characteristics of co-located electricity system infrastructure and electrification costs to customers will also be relevant to screening for promising decommissioning sites and understanding the implications of decommissioning at any specific site identified by the data-driven tool. To the extent possible within the timeline for tool development, it is desirable that the research team also collect data about co-located electricity system infrastructure and transition costs.
3. Timeline. The tool development timeline is expected to produce a beta version of the tool within 12-15 months of the project’s start date. The recipient will demonstrate the functionality of the beta version. Demonstration of this beta version will be restricted to users (e.g., CEC and CPUC staff) who are covered by any non-disclosure agreements associated with the tool’s underlying data, if necessary. The recipient will take feedback given from the demonstrations into consideration in improving and refining the data-driven tool and its outputs.
4. Coordination. The research team will be expected to coordinate, through the CEC, with the teams that are currently managing other related efforts, such as the Strategic Pathways and Analytics for Tactical Decommissioning of Portions of the Natural Gas Infrastructure projects (CEC Agreements PIR-20-008 and PIR-20-009), the hydraulic models and data collected by the CEC via Title 20 regulations, the Gas Utility Demand and Rate Forecasting data collected by the CEC via the 2021 IEPR proceeding, and CPUC’s Long-Term Gas Planning Rulemaking (R.20-01-007).
5. License. In accordance with the PIER Natural Gas Grant terms and conditions, the CEC will have a no-cost, non-exclusive, transferable, irrevocable, royalty-free, worldwide, perpetual license to use, publish, translate, modify, and reproduce any intellectual property created, conceived, discovered, made, developed, altered, or reduced to practice with CEC funds or match funds during or after the Agreement term, as well as any associated proprietary rights to this intellectual property such as patent and copyright and any upgrades or revisions to this intellectual property, for governmental purposes. This includes but is not limited to sharing the intellectual property with other state and local government entities for governmental purposes and providing the intellectual property to a subsequent grant recipient for related research for the CEC. The recipient must design the tool in such a way that future use and modification may be possible.

## Funding

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

There is **up to** **$1,500,000** available for grants awarded under this solicitation. The minimum funding amount for each project is **$1,400,000**. The maximum funding amount is **$1,500,000.**

1. **Match Funding Requirement**

Match funding is not required for this solicitation. However,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 California Energy Commission (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.
* 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 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 | November 17, 2021 |  |
| **Pre-Application Workshop** | **December 7 , 2021** | **1:00-3:00 pm** |
| **Deadline for Written Questions[[2]](#footnote-3)** | **December 21, 2021** | **5:00 p.m.** |
| Anticipated Distribution of Questions and Answers | January 10, 2021 |  |
| **Deadline to Submit Applications** | **February 25, 2022** | **11:59 p.m.** |
| Anticipated Notice of Proposed Award Posting Date | April 9, 2022 |  |
| Anticipated Energy Commission Business Meeting Date | July 2022 |  |
| Anticipated Agreement Start Date | July 30, 2022 |  |
| Anticipated Agreement End Date | March 31, 2025 |  |

## Notice of Pre-Application Workshop

CEC staff will hold one Pre-Application Workshop to discuss the solicitation with potential applicants. Participation is optional but encouraged. The Pre-Application Workshop will be held remotely, consistent with Executive Orders N-25-20 and N-29-20 and the recommendations from the California Department of Public Health to encourage physical distancing to slow the spread of COVID-19. 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 call (916) 654-4381 or refer to the CEC's website at www.energy.ca.gov/contracts/index.html to confirm the date and time.

**Date and time:** December 7, 2021. 1:00 pm (Pacific Time US and Canada)

**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 Link:** <https://energy.zoom.us/j/94383397196?pwd=WDV1WFQvcVdEM2YwNlljanBzSHJCUT09>

**Meeting Password:** datadriven

**Topic:** GFO-21-504 Development of a Data-Driven Tool to Support Strategic and Equitable Decommissioning of Gas Infrastructure

**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 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](mailto:publicadvisor@energy.ca.gov), or 800-822-6228.

* 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) 654-4314 at least five days in advance.

## Questions

During the solicitation process, direct questions to the Commission Agreement Officer listed below:

Eilene Cary, Commission Agreement Officer

California Energy Commission

715 P Street, MS-18

Sacramento, California, 95814

Telephone: (916) 776-0739

E-mail: [eilene.cary@energy.ca.gov](mailto:eilene.cary@energy.ca.gov)

Applicants may ask questions at the Pre-Application Workshop, and may submit written questions via mail and electronic mail. 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., questions concerning application format requirements or attachment instructions) may be submitted to the Commission Agreement Officer (CAO) at any time prior to 5:00 p.m. of the application deadline.

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 to 5:00 p.m. of the application deadline, 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 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/Scoring Criteria and** **Grounds for Rejection** in Part IV, and the relevant PIER Grant terms and conditions located at: http://www.energy.ca.gov/research/contractors.html.

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 upon the posting of the Notice of Proposed Award.

In addition to any other right reserved to it under this solicitation or that it otherwise has, if the CEC determines, in its sole and absolute discretion, that if an agreement is not being successfully executed with an applicant in a timely manner, the CEC may cancel a proposed award and award funds to the next highest scoring applicant.

## Background

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

This solicitation will award projects under the Natural Gas program, which is funded by a ratepayer surcharge on natural gas consumed by ratepayers of NG 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 natural 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**

Natural Gas R&D projects must fall within one or more specific focus areas (**“research initiatives”**) identified in the Natural Gas R&D Budget Plan. This solicitation targets the following research initiative(s) from the Natural Gas R&D Budget Plan for Fiscal Year 2020/2021:[[6]](#footnote-7)

**Natural Gas R&D Budget Plan for Fiscal Year 2020/2021**

* **Research Area:** Energy-Related Environmental Research
  + **Research Initiative:** Development of a Data-Driven, Actionable Tool and Case Studies to Support the Strategic and Equitable Natural Gas Decommissioning
* **Applicable Laws, Policies, and Background Documents**

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

Laws/Regulations

* **AB 32[[7]](#footnote-8) - California Global Warming Solutions Act of 2006**

AB 32created a comprehensive program to reduce greenhouse gas (GHG) emissions in California. GHG reduction strategies include a reduction mandate of 1990 levels by 2020 and a cap-and-trade program. AB 32 designates the 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 every five years.

Additional information: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\_id=200520060AB32

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

* **SB 32[[8]](#footnote-9) - California Global Warming Solutions Act of 2006: emissions limit**

SB32 expands upon AB 32 and requires CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. SB 32 further requires that these emissions 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

* **SB 350[[9]](#footnote-10) - Clean Energy and Pollution Reduction Act of 2015,**

SB 350 does the following: 1) expands California’s RPS goals and requires retail sellers of electricity and local publicly owned electricity to increase their procurement of eligible renewable energy resources; 2) requires the Energy Commission to establish annual targets to achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030; and 3) provide for transformation of the Independent System Operator into a regional organization.

Additional information: http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb\_0301-0350/sb\_350\_bill\_20151007\_chaptered.htm

* **California Energy Code**

The Energy Code is a component of the California Building Standards Code, and is published every three years through the collaborative efforts of state agencies including the California Building Standards Commission and the CEC. The Code ensures that new and existing buildings achieve energy efficiency and preserve outdoor and indoor environmental quality through use of the most energy efficient technologies and construction.

Additional information: http://www.energy.ca.gov/title24/

Applicable Law: California Code of Regulations, Title 24, Part 6 and associated administrative regulations in Part 1

* **SB 100[[10]](#footnote-11) - The 100 Percent Clean Energy Act of 2018**

SB 100 requires that 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. The bill requires the CPUC and CEC, in consultation with CARB, to ensure that California’s transition to a zero-carbon electric system does not cause or contribute to GHG emission increases elsewhere in the western grid.

Additional information:

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\_id=201720180SB100

* **AB 3232[[11]](#footnote-12) - Zero-Emissions Buildings and Sources of Heat Energy,**

AB 3232 requires CEC to assess by January 1, 2021, and in consultation with CPUC, CARB, and CAISO, the potential for California to reduce GHG from the state’s residential and commercial building stock by at least 40 percent below 1990 levels by January 1, 2030. It also requires CEC to include in the 2021 edition of the IEPR, and subsequent IEPRs, a report on the emissions of GHG associated with the supply of energy to residential and commercial buildings.

Additional information: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\_id=201720180AB3232 <https://www.energy.ca.gov/data-reports/reports/building-decarbonization-assessment>

https://efiling.energy.ca.gov/GetDocument.aspx?tn=239368&DocumentContentId=72826

* **AB 2672[[12]](#footnote-13) - Access to energy: disadvantaged communities: San Joaquin Valley**

AB 2672 required the CPUC to initiate a new proceeding (R.15-03-010) to identify disadvantaged communities in the San Joaquin Valley and to analyze economically feasible options to increase access to affordable energy in those disadvantaged communities. AB 2672 also requires CPUC to determine whether the options analyzed by the proceeding would increase access to affordable energy to those disadvantaged communities in a cost-effective manner. The bill further requires CPUC, for those options, to take appropriate action and determine appropriate funding sources.

Additional information: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\_id=201320140AB2672

* **Executive Order B-55-18**

Governor Brown’s Executive Order B-55-18 established a new statewide goal to achieve carbon neutrality no later than 2045. In addition, all policies and programs undertaken to achieve carbon neutrality must seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities, and must be implemented in a manner that supports climate adaptation and biodiversity.

Additional Information:

https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf

Policies/Plans

* **Integrated Energy Policy Report (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.

* **New Residential Zero Net Energy Action Plan 2015-2020**

The Residential New Construction Zero Net Energy Action Plan supports the California Energy Efficiency Strategic Plan’s goal to have 100 % of new homes achieve zero net energy beginning in 2020. The action plan provides a foundation for the development of a robust and self-sustaining zero net energy market for new homes.

Additional information: http://www.californiaznehomes.com/

* **CPUC R.20-01-007, Rulemaking to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and perform Long-Term Gas System Planning**

In order to ensure safe and reliable natural gas service at just and reasonable rates in California, under this rulemaking the CPUC will (1) develop and adopt updated reliability standards that reflect the current and prospective operational challenges to gas system operators; (2) determine the regulatory changes necessary to improve the coordination between gas utilities and gas-fired electric generators; and (3) implement a long-term planning strategy to manage the state’s transition away from natural gas-fueled technologies to meet California’s decarbonization goals.

Additional information https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M325/K641/325641802.PDF (effective January 16, 2020):

* **CPUC D.20-07-032, Decision Adopting Metrics and Methodologies for Assessing the Relative Affordability of Utility Service** (as part of CPUC OIR.18-07-006 Order Instituting Rulemaking to Establish A Framework and Processes for Assessing the Affordability of Utility Service)

D.20-07-032, issued in July of 2020, directed CPUC staff to develop an Annual Affordability Report that would include an assessment of affordability of electricity, natural gas, water, and communications services using the most recent data available. The Decision defined affordability as the degree to which a representative household is able to pay for an essential utility service charge, given its socioeconomic status.

Additional information:

https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M344/K049/344049206.PDF

https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/reports/2019-annual-affordability-report.pdf

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 CEC research and related activities associated with strategic decommissioning and the collection of Natural Gas system data.

* CEC Staff Workshop: Data-Driven Tool to Support Strategic and Equitable Natural Gas Decommissioning (July 12, 2021)
  + Staff Workshop information located here: https://www.energy.ca.gov/event/workshop/2021-07/staff-workshop-data-driven-tool-support-strategic-and-equitable-natural-gas
  + Docket containing public comments located here: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-ERDD-01.
* CEC Agreement 500-20-003 from RFP-20-501*. Establishing a Long-Term Natural Gas Research Strategy to Achieve Aggressive Statewide Carbon Neutrality Goals*, with Guidehouse, Inc. Item 12: <https://www.energy.ca.gov/files/june-9-2021-business-meeting-packets>.
* CEC Agreement PIR-20-008, *Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California, with RAND Corporation.* Item 13a: <https://www.energy.ca.gov/files/june-9-2021-business-meeting-packets>.
* CEC Agreement PIR-20-009, *Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Northern California*, with Energy and Environmental Economics, Inc (E3). Item 13b: <https://www.energy.ca.gov/files/june-9-2021-business-meeting-packets>.
* IEPR Commissioner Workshop on Natural Gas Infrastructure (May 20, 2021)
  + Workshop information located here: https://www.energy.ca.gov/event/meeting/2021-05/iepr-commissioner-workshop-natural-gas-infrastructure.
  + Docket containing public comments, located here:

https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-IEPR-05.

* CEC Commissioner Workshop: Title 20 Data Collection Regulations to Support New Analytical Needs (November 16, 2016)
  + Workshop information located here: https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350/energy-data-collection-rulemaking/workshops-notices-and-documents-increasing-access-energy-data.

The documents and resources below are referred to in the solicitation manual:

Aas, Dan, Amber Mahone, Zack Subin, Michael Mac Kinnon, Blake Lane, and Snuller Price. 2020. *The Challenge of Retail Gas in California’s Low-Carbon Future: Technology Options, Customer Costs and Public Health Benefits of Reducing Natural Gas Use*. https://ww2.energy.ca.gov/2019publications/CEC-500-2019-055/index.html.

Bilich, Andy, Michael Colvin, and Timothy O’Connor. 2019. *Managing the Transition: Proactive Solutions for Stranded Gas Asset Risk in California*. Environmental Defense Fund. <https://www.edf.org/sites/default/files/documents/Managing_the_Transition_new.pdf>.

Kenney, Michael, Nicholas Janusch, Ingrid Neumann, and Mike Jaske. 2021. *California Building Decarbonization Assessment*. California Energy Commission. Publication Number: CEC-400-2021-006-CMF. https://efiling.energy.ca.gov/GetDocument.aspx?tn=239311&DocumentContentId=72767

California Energy Commission. 2021a. Business Meeting Packets, June 9, 2021 Business Meeting: <https://www.energy.ca.gov/files/june-9-2021-business-meeting-packets>.

California Energy Commission. 2021b. Electricity and Natural Gas Demand Forecast Docket 21-IEPR-03. <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-IEPR-03>.

California Energy Commission. 2021c. Revised Proposed Changes to the 2022 California Building Energy Efficiency Standards (Energy Code). <https://efiling.energy.ca.gov/GetDocument.aspx?tn=238848>. See also: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency, and https://efiling.energy.ca.gov/GetDocument.aspx?tn=239368&DocumentContentId=72826

California Energy Commission. Proposed 2021 *(approval forthcoming*). *Natural Gas Research and Development Program, Proposed Budget Plan for Fiscal Year 2021-2022*. https://www.energy.ca.gov/publications/2021/natural-gas-research-and-development-program-proposed-budget-plan-fiscal-year.

California Public Utilities Commission*.* 2020*. Order Instituting Rulemaking to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and Perform Long-Term Gas System Planning*. R.20-01-007. January 27, 2020. <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M325/K641/325641802.PDF>.

The Greenlining Institute. 2019. *Equitable Building Electrification: A Framework for Powering Resilient Communities*. <https://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf>

Gridworks. 2019. *California’s Gas System in Transition: Equitable, Affordable, Decarbonized, and Smaller*. <https://gridworks.org/wp-content/uploads/2019/09/CA_Gas_System_in_Transition.pdf>.

Mahone, Amber, Zachary Subin, Jenya Kahn-Lang, Douglas Allen, Vivian Li, Gerrit De Moor, Nancy Ryan, Snuller Price. 2018. *Deep Decarbonization in a High Renewables Future: Updated Results from the California PATHWAYS Model*. California Energy Commission. CEC-500-2018-012. <https://www.energy.ca.gov/publications/2018/deep-decarbonization-high-renewables-future-updated-results-california-pathways>.

Office of Governor Gavin Newsom. July 9, 2021. <https://www.gov.ca.gov/2021/07/09/governor-newsom-holds-virtual-discussion-with-leading-climate-scientists-on-states-progress-toward-carbon-neutrality/>.

Ong, Alison, Michael Mastrandrea, and Michael Wara. 2021. *The Costs of Building Decarbonization Policy Proposals for California Natural Gas Ratepayers: Identifying Cost-effective Paths to a Zero Carbon Building Fleet*, Stanford Woods Institute Climate and Energy Policy Program White Paper. <https://woodsinstitute.stanford.edu/system/files/publications/Building_Decarbonization_Policy_CA_Natural_Gas_Ratepayers_Whitepaper.pdf>.

Wei, Max, Shuba V. Raghavan, Patricia Hidalgo-Gonzalez. 2017. Building a Healthier and More Robust Future: 2050 Low-Carbon Energy Scenarios for California. California Energy Commission. CEC-500-2019-033. <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-033/CEC-500-2019-033.pdf>.

## Match Funding

* **“Match funds”** includes cash or in-kind (non-cash) contributions provided by the applicant, subcontractors, 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** is typically in the form of the value of personnel, goods, and services, including direct and indirect costs. This can include equipment, facilities, and other property as long as the value of the contribution is based on documented market values or book values, prorated for its use in the project, and depreciated or amortized over the term of the project using generally accepted accounting principles (GAAP).
* **Match** funds must be spent only during the agreement term, either before or concurrently with CEC funds. Match funds also must be reported in invoices submitted to the CEC.
* All applicants providing match funds must submit commitment letters, **including prime and subcontractors**, 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 11, Commitment and Support Letter Form. Commitment and support letters must be submitted with the application to be considered.
* Any match pledged in Attachment 1 must 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, Attachment 1 must match this amount). Only 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. Applicants shall adhere to travel restrictions of using state funds to travel to certain other states pursuant to AB 1887 (2016) and codified at California Government Code Section 11139.8. All applicants are encouraged to consider the Attorney General’s website https://oag.ca.gov/ab1887 for a current list of states subject to travel restrictions. Awarded Grants under this solicitation shall not contain travel paid for with Commission funds (applicants can instead use match funds) to the listed states unless the Commission approves in writing that the trip falls within one of the exceptions under the law.
    - **“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 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 subcontractors.
* 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 Texas. 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 Texas. The recipient orders the temperature sensors directly from Texas.  The manufacturer has training centers in CA that instructs purchasers on how to use the sensors. The invoice shows that the transaction occurred in Texas. 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 California Energy Commission’s Natural Gas Program must give priority to “California-Based Entities” (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 subcontractor.
  + 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 natural gas Investor Owned Utility (NG 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 natural gas IOU ratepayers.

## Terms and Conditions

Each grant agreement resulting from this solicitation will include terms and conditions that set forth the recipient’s rights and responsibilities. By signing the Application Form (Attachment 1), 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; or (3) standard terms and conditions. All terms and conditions are located at http://www.energy.ca.gov/research/contractors.html. Please refer to the applicable PIER Natural Gas Grant terms and conditions. Failure to agree to the terms and conditions by taking actions such as failing to sign the Application Form or indicating that acceptance is based on modification of the terms will result in **rejection** of the application. Applicants **must** **read** the terms and conditions carefully.The CEC reserves the right to modify the terms and conditionsprior to executing grant agreements.

## 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 California Public Utilities Commission (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 Natural Gas Program in the more aggressive statewide decarbonization goals set by Senate Bill 100 (De León, 2018) and Executive Order B-55-18.

The California Energy Commission 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 CalEnviroScreen3.0. 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 (CalEnviroScreen3.0): <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>.



# 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 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:   + **Application Form** (Attachment)   + **Budget Forms** (Attachment)   + **CEQA Compliance Form** (Attachment)   + **Project Performance Metrics** (Attachment) |
| **Number of Copies of the Application** | For Hard Copy Submittal Only:   * **One** hard copy (with signatures) * **One** electronic copy (On USB memory stick) |

## Online Method For Delivery

Due to COVID-19 health crises, all applications must be submitted online. Hard copies will not be accepted at this time.

The method of delivery for this solicitation is the Energy Commission Grant Solicitation System (GSS), available at: https://gss.energy.ca.gov/. This online tool allows applicants to submit their electronic documents to the CEC prior to the date and time specified in this solicitation. Electronic files must be in Microsoft Word XP (.doc format) and Excel Office Suite formats unless originally provided in the solicitation in another format.  Attachments requiring signatures may be scanned and submitted in PDF format.  Completed Budget Forms, Attachment 5, must be in Excel format.

The deadline to submit grant applications through the CEC’s GSS is 11:59 p.m. The GSS system 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. NO EXCEPTIONS will be entertained.

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 the GSS system, upload times may be much longer than expected. For example, some past applicants experienced unexpected issues on their end, causing long delays that prevented timely submission. They spent significant time and resources on applications the CEC will not consider. Please plan accordingly. For instructions on how to apply using the GSS system, please see the How to Apply document available on the CEC website at: [**https://www.energy.ca.gov/media/1654**](https://www.energy.ca.gov/media/1654)

First time users must register as a new user to access the system. Applicants will receive a confirmation email after all required documents have been successfully uploaded. A tutorial of the system will be provided at the pre-application workshops and you may contact the Commission Agreement Officer identified in the Questions section of the solicitation for more assistance.

## Application Organization and Content

1. Label the proposal application cover “Grant Funding Opportunity GFO-21-504” and include: (a) the title of the application; and (b) the applicant’s name.
2. Separate each section of the application by Attachment number and section title indicated below.

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

1. Application Form (Attachment 1)

This form requests basic information about the applicant and the project. The application includes an original form that includes all requested information. The application must be signed by an authorized representative of the applicant’s organization or will be failed as indicated in Section IV.E.

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. Executive Summary Form (Attachment 2)

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 3)

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 within the timeframes specified in this solicitation (see Section I.D). All supporting documentation must be included in Attachment 8.

1. Project Team Form (Attachment 4)

Identify by name all key personnel[[13]](#footnote-14) assigned to the project, including the project manager and principal investigator (if applicable), and individuals employed by any major subcontractor (a major subcontractor is a subcontractor receiving at least 25% of Commission funds or $100,000, whichever is less). Clearly describe their individual areas of responsibility. Include the information required for each individual, including a resume (maximum two pages, printed double-sided).

1. Scope of Work Template (Attachments 5)

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. See requirements in section III.A.

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

1. Project Schedule (Attachment 6)

The Project Schedule includes a list of all product, 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 7)

The budget forms are in MS Excel format. Detailed instructions for completing them are included at the beginning of Attachment 7.  **Read the instructions 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 approved agreement term. Match share requirements are discussed in Part I 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 terms and conditions. Rates and personnel shown must reflect the rates and personnel the applicant would include if selected as a Recipient.
3. The proposed rates are considered capped and may not change during the agreement term. The Recipient will only be reimbursed for **actual** rates up to the rate caps.
4. The budget must NOT include any Recipient profit from the proposed project, either as a reimbursed item, match share, or as part of overhead or general and administrative expenses (subcontractor profit is allowable, though the maximum percentage allowed is 10 % of the total subcontractor rates for labor, and other direct and indirect costs as indicated in the Category Budget form). Please review the terms and conditions and budget forms for additional restrictions and requirements.
5. 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 Commission Agreement Manager.
6. 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 under this Agreement with CEC funds, with the exception of costs incurred by University of California recipients.
7. 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.
8. All applicants should go to the Attorney General’s website https://oag.ca.gov/ab1887 for a current list of states subject to travel restrictions. Grants awarded under this solicitation shall not contain travel paid for with Commission funds (applicants can instead use match funds) to the listed states unless the Commission approves in writing that the trip falls within one of the exceptions under the law.
9. **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, 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, 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 8)

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 Notice of Proposed Award 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 9)
   * 1. Section 1: Provide applicant and subcontractor 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 10)

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.

* **Project partners** that are making contributions other than match funding or a study 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 study 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 11)

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 12)

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 13)

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

# 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 **Notice of Proposed Award (NOPA)** that includes: (1) the total proposed funding amount; (2) the rank order of applicants; and (3) the amount of each proposed award. The CEC will post the NOPA at its headquarters in Sacramento and on its website, and will 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 Commission Agreement Officer listed in Part I. A request for debriefing must be received **no later than 30 calendar days** after the NOPA is released.

* 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 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.
* 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: www.energy.ca.gov/contracts. 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 withdraw or modify a submitted application before the deadline to submit applications by sending a letter to the Commission Agreement Officer listed in Part I. 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.”

1. **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.

## 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 Form (Attachment 1) is signed where indicated. | Pass  Fail |
| 1. The Applicant Declaration Form (Attachment 12) is signed where indicated. | 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.

## 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. |

**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** |

|  |
| --- |
| **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. Any estimates of energy savings or GHG impacts should be calculated as specified in the References for Calculating Energy End-Use and GHG Emissions (Attachment), to the extent that the references apply to the proposed project. |

|  |  |
| --- | --- |
| **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. Describe how the proposed model/tool/study will be used by key stakeholders (e.g., policy-makers, project developers, other researchers, etc.). 4. Describes the advantage of the proposed model/tool/study over that currently being used by key stakeholders. 5. 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 subcontractor). 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 knowledge transfer plan, including how key stakeholders and potential users will be engaged, and the plan to disseminate knowledge of the project’s results to those stakeholders and users. 8. 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 Natural Gas Investor-Owned Utility (IOU) ratepayers and provides clear, plausible, and justifiable (quantitative preferred) potential benefits, such as energy cost reductions, infrastructure resiliency, infrastructure reliability. 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. Identifies how outputs of the tool/study will benefit key stakeholders (e.g., streamline planning, help eliminate barriers, stimulate growth of applicable market sectors). | **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 subcontractor 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 subcontractors, 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 subcontractors). 5. Justifies the reasonableness of indirect costs (e.g., overhead, facility charges (e.g., rent, utilities), burdens, subcontractor 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 California-Based Entities 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:  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. **California Based Entities (CBE) Preference Points**   Projects that maximize the spending of CEC funds on California Based Entities will receive points as indicated in the table below (see Funds Spent in California and California-Based Entities section for more details).  Projects that meet these requirements will receive preference points as indicated below:   |  |  | | --- | --- | | **Percentage of PIER Natural Gas 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 | | --- | --- | | 80% | 5 | | 60 to <80% | 4 | | 40 to <60% | 3 | | 20 to <40% | 2 | | 10 to <20 % | 1 | | **5** |
| 1. **Disadvantaged & Low-Income Communities**   In order to receive or qualify for additional points, the proposed project must demonstrate benefits to the disadvantaged and/or low-income community in order to receive additional points.   1. Proposal identifies how the target market(s) will benefit disadvantaged and/or low-income communities. 2. Identifies economic impact on low-income and disadvantaged communities 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 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. | **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., questions concerning application format requirements or attachment instructions) or to questions that address an ambiguity, conflict, discrepancy, omission, or other error in the solicitation. Such questions may be submitted to the Commission Agreement Officer listed in Section G at any time prior to 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. 2020. *The Natural Gas Research Development and Demonstration Program Proposed Budget Plan for Fiscal Year 2020-21*. California Energy Commission. https://ww2.energy.ca.gov/2020publications/CEC-500-2020-081/CEC-500-2020-081.pdf [↑](#footnote-ref-7)
7. AB 32 (Statutes of 2006, chapter 488) [↑](#footnote-ref-8)
8. SB 32 (Statutes of 2016, chapter 249) [↑](#footnote-ref-9)
9. SB 350 (Statutes of 2015, chapter 547) [↑](#footnote-ref-10)
10. SB 100 (Statutes of 2017, chapter 312) [↑](#footnote-ref-11)
11. AB 3232 (Statutes of 2017, chapter 373) [↑](#footnote-ref-12)
12. AB 2672 (Chapter 616, Statutes of 2014) [↑](#footnote-ref-13)
13. “Key personnel” are individuals that are critical to the project due to their experience, knowledge, and/or capabilities. [↑](#footnote-ref-14)