**Attachment 1**

**Exhibit A**

**SCOPE OF WORK**

**TECHNICAL TASK LIST**

*<Insert the Task numbers and Task names for your Agreement. Applicants may leave the CPR column blank.>*

| **Task #** | **CPR** | **Task Name** |
| --- | --- | --- |
| 1 |  | Administration |
| 2 |  | <Insert Task Name> |
| 3 |  | <Insert Task Name> |
| *<Etc.>* |  | <Insert Task Name> |
| *<Etc.>* |  | <Insert Task Name> |
| *<Third to Last Task>* |  | Operations and Reliability |
| *<Second to Last Task>* |  | Data Collection and Analysis |
| *<Last Task>* |  | Project Fact Sheet |

**KEY NAME LIST**

*<Insert the Task numbers and the Key names for each Task in your Project. Include Key names only if the value of the project would significantly change without those personnel, subcontractors, or partners. Add additional lines as needed. Alternatively, you may delete this table if there are no key names.>*

| **Task #** | **Key Personnel** | **Key Subcontractor(s)** | **Key Partner(s)** |
| --- | --- | --- | --- |
| 1 | <Name> | <Name> | <Name> |
| 2 | <Name> | <Name> | <Name> |
| 3 | <Name> | <Name> | <Name> |
| *<Etc.>* | <Name> | <Name> | <Name> |

**GLOSSARY**

Specific terms and acronyms used throughout this scope of work are defined as follows:

| **Term/ Acronym** | **Definition** |
| --- | --- |
| CAM | Commission Agreement Manager |
| CAO | Commission Agreement Officer |
| CEC | California Energy Commission |
| CTP | Clean Transportation Program |
| CPR | Critical Project Review |
| FTD | Fuels and Transportation Division |
| O&M | Operations and maintenance |
| Recipient | An applicant awarded a grant under a CEC solicitation |
|  | <Insert additional rows as needed.> |

*<Applicants* ***DO NOT*** *need to complete items listed under “Background.” This will be completed by the CAM during agreement development if proposal is recommended for funding.>*

**Background**

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program. The statute authorizes the California Energy Commission (CEC) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state’s climate change, clean air, and alternative energy policies. AB 126 (Reyes, Chapter 319, Statutes of 2023) re-authorizes the Clean Transportation Program through July 1, 2035. The Clean Transportation Program has an annual budget of approximately $100 million and has provided financial support for projects that:

* Reduce California’s use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
* Produce sustainable alternative and renewable low-carbon fuels in California.
* Expand alternative fueling infrastructure and fueling stations.
* Improve the efficiency, performance and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.
* Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use.
* Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
* Establish workforce training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

On November 3, 2023, the CEC released a Grant Funding Opportunity (GFO) entitled “Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations (IMPROVE for H2).” This competitive grant solicitation was to fund projects that will support the advancement of hydrogen refueling station operations and maintenance (O&M) to improve the customer experience. In response to GFO-23-604, the Recipient submitted application which was proposed for funding in the CEC’s Notice of Proposed Awards on November 3, 2023 GFO-23-604 and Recipient’s application are hereby incorporated by reference into this Agreement in their entirety.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient’s Application, the Solicitation shall control. In the event of any conflict or inconsistency between the Recipient’s Application and the terms of CEC’s Award, CEC’s Award shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the Recipient’s Application, the terms of this Agreement shall control.

**Problem Statement:**

*<see instructions>*

**Goals of the Agreement:**

The goal of this Agreement is to… <see instructions>

**Objectives of the Agreement:**

The objectives of this Agreement are to… <see instructions>

**TASK 1 ADMINISTRATION**

**Task 1.1 Attend Kick-off Meeting**

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement. The Commission Agreement Manager (CAM) shall designate the date and location of this meeting and provide an agenda to the Recipient prior to the meeting.

**The Recipient shall:**

* Attend a “Kick-Off” meeting that includes the CAM and may include the Commission Agreement Officer (CAO) and a representative of the CEC Accounting Office. The Recipient shall bring their Project Manager, Agreement Administrator, Accounting Officer, and any others determined necessary by the Recipient or specifically requested by the CAM to this meeting.
* Provide a written statement of project activities that have occurred after the notice of proposed awards but prior to the execution of the agreement using match funds. If none, provide a statement that no work has been completed using match funds prior to the execution of the agreement. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.
* Discuss the following administrative and technical aspects of this Agreement:
* Agreement Terms and Conditions
* Critical Project Review (Task 1.2)
* Match fund documentation (Task 1.7). No reimbursable work may be done until this documentation is in place.
* Permit documentation (Task 1.8)
* Subawards needed to carry out project (Task 1.9)
* The CAM’s expectations for accomplishing tasks described in the Scope of Work
* An updated Schedule of Products and Due Dates
* Monthly Calls (Task 1.4)
* Quarterly Progress Reports (Task 1.5)
* Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
* Final Report (Task 1.6)

**Recipient Products:**

* Updated Schedule of Products
* Updated List of Match Funds
* Updated List of Permits
* Written Statement of Match Share Activities

**Commission Agreement Manager Product:**

* Kick-Off Meeting Agenda

**Task 1.2 Critical Project Review (CPR) Meetings**

CPRs provide the opportunity for frank discussions between the CEC and the Recipient. The goal of this task is to determine if the project should continue to receive CEC funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule, or budget.

The CAM may schedule CPR meetings as necessary, and meeting costs will be borne by the Recipient.

Meeting participants include the CAM and the Recipient and may include the CAO, the Fuels and Transportation Division (FTD) program lead, other CEC staff and Management as well as other individuals selected by the CAM to provide support to the CEC.

**The CAM shall:**

* Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the CEC, but they may take place at another location or remotely.
* Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
* Conduct and make a record of each CPR meeting. Prepare a schedule for providing the written determination described below.
* Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see section 8 of the Terms and Conditions). If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for Transportation for his or her concurrence.
* Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

**The Recipient shall:**

* Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the CAM and any other designated reviewers at least 15 working days in advance of each CPR meeting.
* Present the required information at each CPR meeting and participate in a discussion about the Agreement.

**CAM Products:**

* Agenda and a list of expected participants
* Schedule for written determination
* Written determination

**Recipient Product:**

* CPR Report(s)

# Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

* Meet with CEC staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

This meeting will be attended by, at a minimum, the Recipient and the CAM. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the CAM.

The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The CAM will determine the appropriate meeting participants.

The administrative portion of the meeting shall be a discussion with the CAM about the following Agreement closeout items:

* What to do with any equipment purchased with CEC funds (Options).
* CEC request for specific “generated” data (not already provided in Agreement products).
* Need to document Recipient’s disclosure of “subject inventions” developed under the Agreement, if applicable.
* “Surviving” Agreement provisions.
* Final invoicing and release of retention.
* Prepare a schedule for completing the closeout activities for this Agreement.

**Products:**

* Written documentation of meeting agreements.
* Schedule for completing closeout activities.

Task 1.4 Monthly Calls

The goal of this task is to have calls at least monthly between CAM and Recipient to verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

The objectives of this task are to verbally summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, to verify match funds are being proportionally spent concurrently or in advance of CEC funds or are being spent in accordance with an approved Match Funding Spending Plan, to form the basis for determining whether invoices are consistent with work performed, and to answer any other questions from the CAM. Monthly calls might not be held on those months when a quarterly progress report is submitted, or the CAM determines that a monthly call is unnecessary.

**The CAM shall:**

* Schedule monthly calls.
* Provide questions to the Recipient prior to the monthly call.
* Provide call summary notes to Recipient of items discussed during call.

**The Recipient shall:**

* Review the questions provided by CAM prior to the monthly call.
* Provide verbal answers to the CAM during the call.

**Product:**

* Email to CAM concurring with call summary notes.

Task 1.5 Quarterly Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

**The Recipient shall:**

* Prepare a Quarterly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Also include reliability data to be collected and provided quarterly as specified in the Data Collection and Analysis Task. Progress reports are due to the CAM the 10th day of each January, April, July, and October. The Quarterly Progress Report template can be found on the ECAMS Resources webpage available at <https://www.energy.ca.gov/media/4691>.

**Product:**

* Quarterly Progress Reports

Task 1.6 Final Report

The goal of the Final Report is to assess the project’s success in achieving the Agreement’s goals and objectives and lessons learned from the project.

The objectives of the Final Report are to clearly and completely describe the project’s purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.

The Final Report shall be a public document and is limited to 25-pages. If the Recipient has obtained confidential status from the CEC and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

In addition to any other applicable requirements, the Final Report must comply with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of disability; all applicable regulations and guidelines issued pursuant to the ADA; Cal. Gov. Code sects. 7405 and 11135; and Web Content Accessibility Guidelines 2.0, or a subsequent version, as published by the Web Accessibility Initiative of the World Wide Web Consortium at a minimum Level AA success criteria.

The Recipient shall:

* Prepare an Outline of the Final Report, if requested by the CAM.
* Prepare a Final Report complying with ADA requirements and following the latest version of the Final Report guidelines which will be provided by the CAM. The CAM shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
* Submit Final Report in Microsoft Word format or similar electronic format as approved by the CAM.

**Products:**

* Outline of the Final Report, if requested
* Draft Final Report
* Final Report

**Task 1.7 Identify and Obtain Matching Funds**

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the CEC budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

**The Recipient shall:**

* Prepare a letter documenting the match funding committed to this Agreement and submit it to the CAM at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the CEC awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter. If match funds were a part of the proposal that led to the CEC awarding this Agreement, then provide in the letter a list of the match funds that identifies the:
  + Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
  + Amount of each in-kind contribution, a description, documented market or book value, and its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
* Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
* Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
* Provide the appropriate information to the CAM if during the course of the Agreement additional match funds are received.
* Notify the CAM within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR meeting.

Products:

* A letter regarding match funds or stating that no match funds are provided.
* Copy(ies) of each match fund commitment letter(s) (if applicable).
* Letter(s) for new match funds (if applicable).
* Letter that match funds were reduced (if applicable).

**Task 1.8 Identify and Obtain Required Permits**

The goal of this task is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. Although the CEC budget for this task will be zero dollars, the Recipient may budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

**The Recipient shall:**

* Prepare a letter documenting the permits required to conduct this Agreement and submit it to the CAM at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
  + A list of the permits that identifies the:
    - Type of permit
    - Name, address and telephone number of the permitting jurisdictions or lead agencies
  + The schedule the Recipient will follow in applying for and obtaining these permits.
* Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule, and the copies of the permits. The implications to the Agreement if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in the Progress Reports and will be a topic at CPR meetings.
* If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the CAM.
* As permits are obtained, send a copy of each approved permit to the CAM.
* If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 working days. Either of these events may trigger an additional CPR.

Products:

* Letter documenting the permits or stating that no permits are required.
* A copy of each approved permit (if applicable).
* Updated list of permits as they change during the term of the Agreement (if applicable).
* Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable).
* A copy of each final approved permit (if applicable).

**Task 1.9 Obtain and Execute Subawards**

The goal of this task is to ensure quality products and to procure subrecipients required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient’s own procurement policies and procedures.

**The Recipient shall:**

* Manage and coordinate subrecipient activities.
* If requested by the CAM, submit a draft of each subaward required to conduct the work under this Agreement to the CAM for review.
* If requested by the CAM, submit a final copy of the executed subaward.
* If Recipient intends to add new subrecipients or change subrecipients, then the Recipient shall notify the CAM.

**Products:**

* Letter describing the subawards needed or stating that no subawards are required.
* Draft subcontracts (if requested).
* Final subcontracts (if requested).

**TECHNICAL TASKS**

**TASK 2** *<insert task name using ALL CAPS>*

The goal of this task is ... *<Complete the sentence with a brief description of the goal(s)*. *Please be brief,* *two to three sentences maximum*. *See instructions.>*

**The Recipient shall:**

* *<Insert verb in active tense ... complete the sentence.>*
* *<Insert verb in active tense ... complete the sentence.>*
* *<Etc. See instructions>*

**Products:**

*<Products incorporate the knowledge and understanding gained by performing the activities, and are* ***submitted to the CEC*** *for review, comment, and approval. Products include, but are not limited to, written reports that describe methods, test plans, results of testing, analysis of data, conclusions, and recommendations for future study, workshop agendas and summaries, description and photographs of equipment/product developed, summaries of advisory group meetings, computer software with written instructions for data input and use of the software, if intended for public or CEC use, and production prototypes. For each product there must be a bullet under “The Recipient Shall:” explaining it in more detail.>*

* *<Insert 1st product (name only) and include draft and final versions as necessary>*
* *<Insert 2nd product (name only) and include draft and final versions as necessary>*
* *<Etc. See instructions>*

**TASK 3 <insert task name using ALL CAPS>**

The goal of this task is to ... *<Complete the sentence with a brief description of the goal(s)*. *Please be brief,* *two to three sentences maximum*. *See instructions.>*

**The Recipient shall:**

* *<Insert verb in active tense ... complete the sentence.>*
* *<Insert verb in active tense ... complete the sentence.>*
* *<Etc. See instructions>*

**Products:**

* *<Insert 1st product (name only) and include draft and final versions as necessary>*
* *<Insert 2nd product (name only) and include draft and final versions as necessary>*
* *<Etc. See instructions>*

**<Add the appropriate number of tasks for the Agreement>**

**TASK *<Third to Last>* OPERATIONS AND RELIABILITY**

The goal of this task is to operate all hydrogen refueling stations included in the project and to plan for and implement maintenance strategies to achieve excellent station reliability.

**The Recipient shall:**

* Operate each eligible hydrogen refueling station included in this project and maintain Open Retail status during the term of this Agreement.
* Provide an *Operations and Reliability Plan* for the project explaining how 95% uptime at each eligible hydrogen station included in the project will be achieved. The Plan shall include, but is not limited to:
  + Explanation of the staff resources and procedures for conducting O&M.
  + Description of methods for communicating with and providing help to customers.
  + Clear and detailed strategies for achieving 95% station uptime and ensuring customer satisfaction.
  + Description and frequency of preventative or planned maintenance.
  + Response times for various types of unplanned maintenance issues.
* Conduct planned and unplanned maintenance of each eligible hydrogen refueling station included in this project as outlined in the Operations and Reliability Plan.

Without limitation to other rights and remedies which the CEC may have, including but not limited to survival provisions specified in the Terms and Conditions of this agreement, the requirement that the Recipient commit to operating each hydrogen refueling station included in this project for four years from execution of this Agreement, as feasible, and maintain a 95% uptime, shall survive the completion or termination date of this agreement. In addition to other requirements in the Terms and Conditions of this agreement, all CEC-reimbursable expenditures must be incurred within the Agreement term.

**Products:**

* Operations and Reliability Plan

**TASK *<Second to Last>* DATA COLLECTION AND ANALYSIS**

The goal of this task is to collect operational data from the project and to analyze that data for economic and environmental impacts.

**The Recipient shall:**

* Complete and submit the *NREL Data Collection Tool* (to be provided by the CAM) quarterly for each hydrogen refueling station in the project throughout the project term.
* Complete and submit a *Renewable Hydrogen Report* every six months during the term of this agreement the percentage of renewable hydrogen dispensed at each hydrogen refueling station in the project, the carbon intensity of the renewable hydrogen, and the Low Carbon Fuel Standard pathway associated with the renewable hydrogen.
* Perform and submit results of purity testing using hydrogen collected at the nozzle for each hose at each hydrogen refueling station in the project:
  + Every six months during the term of this agreement.
  + At any station when it changes from Retail: Unavailable to Retail: Open.
  + As needed when the hydrogen lines are potentially exposed to contamination due to maintenance or other activity.

Hydrogen purity readings shall be collected according to CCR Title 4 Business Regulations, Division 9 Measurement Standards, Chapter 6 Automotive Products Specifications, Article 8 Specifications for Hydrogen Used in Internal Combustion Engines and Fuel Cells, Sections 4180 and 4181.

* Comply with the Petroleum Industry Information Reporting Act (PIIRA) and complete [CEC Form A15](https://a15.energy.ca.gov/), found at https://a15.energy.ca.gov/, on an annual basis for each hydrogen refueling station in the project. Submit the form to the CEC’s PIIRA Data Collection Unit per the instructions on the website.
* For the duration of the project, collect and provide throughput, usage, and operations data from each hydrogen refueling station in the project including, but not limited to:
  + Number of refueling sessions
  + Average refueling station downtime
  + Average refueling session duration
  + Average kilograms of hydrogen dispensed per refueling session
  + Average retail price of hydrogen
  + Normal operating hours, and explanations of variations
  + Gallons of gasoline and/or diesel fuel displaced (with associated mileage information)
  + Expected air emissions reduction, for example:
    - Non-methane hydrocarbons
    - Oxides of nitrogen
    - Particulate Matter
    - Formaldehyde
* For the duration of the project, collect and provide reliability data on a quarterly basis with the Quarterly Progress Report (Task 1.5), including, but not limited to:
  + Availability of operational fueling nozzles
  + Whether hydrogen is available for refueling at the station
  + Volume of hydrogen dispensed
  + Number of vehicles fueled by a station
  + Station uptime, calculated as a quarterly average percentage and defined as (the total hours the station is available over the quarter / the total possible hours of operation over the quarter) X 100
* Identify any current and planned use of renewable energy at the facility.
* Provide data on job creation, economic development, and increased state revenue as a result of the project.
* Provide a quantified estimate of the project’s carbon intensity values for life-cycle greenhouse gas emissions.
* Compare any project performance and expectations provided in the proposal to CEC with actual project performance and accomplishments.
* Provide a *Data Collection and Information Analysis Report* that lists and analyzes all the data and information described above, aside from the data submitted in the NREL Data Collection Tool, the A15 form, the purity tests, the renewable hydrogen reports, and the reliability data to be provided with the Quarterly Progress Report.

**Products:**

* Quarterly NREL Data Collection Tool
* Semiannual renewable hydrogen report
* Semiannual and as needed hydrogen purity test results
* Annual CEC A15 form
* Reliability data submitted with each Quarterly Progress Report
* Data Collection and Information Analysis Report

**TASK *<Last>* PROJECT FACT SHEET**

The goal of this task is to develop an initial and final project fact sheet that describes the CEC-funded project and the benefits resulting from the project for the public and key decision makers.

**The Recipient shall:**

* Prepare an *Initial Project Fact Sheet* at start of the project that describes the project and the expected benefits. Use the format provided by the CAM.
* Prepare a *Final Project Fact Sheet* at the project’s conclusion that describes the project, the actual benefits resulting from the project, and lessons learned from implementing the project. Use the format provided by the CAM.
* Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.

**Products:**

* Initial Project Fact Sheet
* Final Project Fact Sheet
* High Quality Digital Photographs