



STATE OF CALIFORNIA

CONTRACT REQUEST FORM (CRF)

CEC-94 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

A) New Agreement # 600-20-008 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Mark Johnson	6	916-776-7196

C) Contractor's Legal Name	Federal ID #
California Air Resources Board	94-6001347

D) Title of Project
Testing the Clean Transportation Program Hydrogen Refueling Stations

E) Term and Amount

Start Date	End Date	Amount
6 / 9 / 2021	8 / 31 / 2025	\$ 850,000

F) Business Meeting Information

☐ Operational agreement (see CAM Manual for list) to be approved by Executive Director

☐ ARFVTP agreements \$75K and under delegated to Executive Director

Proposed Business Meeting Date 6 / 9 / 2021 ☐ Consent ☒ Discussion

Business Meeting Presenter Mark Johnson Time Needed: 5 minutes

Please select one list serve. Altfuels (AB118- ARFVTP)

Agenda Item Subject and Description:**California Air Resources Board.**

Proposed resolution approving Agreement 600-20-008 with the California Air Resources Board (CARB) for an \$850,000 contract to build, commission, and operate the Hydrogen Station Equipment Performance device on behalf of the CEC, and adopting staff's determination that this action is exempt from CEQA. CARB will use the device to evaluate safety and performance of hydrogen refueling stations before opening to the public. (Clean Transportation Program funding) Contact: Mark Johnson (Staff presentation: 5 minutes)

G) California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?

☒ Yes (skip to question 2) ☐ No (complete the following (PRC 21065 and 14 CCR 15378)):

2. If Agreement is considered a "Project" under CEQA:

a) ☒ Agreement **IS** exempt.

☐ Statutory Exemption. List PRC and/or CCR section number:

☒ Categorical Exemption. List CCR section number: Cal. Code Regs., tit. 14, sections 15301, 15306

☐ Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section: This project will involve the building, commissioning, and deployment of a device to evaluate safety and performance of existing hydrogen refueling stations. The device is expected to be built at an existing facility and is not expected to require any permanent modifications to the facility or result in the expansion of an existing or former use of the facility. Building of the device is not expected to generate any hazardous waste or excessive noise or odors. The device will be transported to existing hydrogen



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refueling stations in California in order to retrieve data to test the stations' compliance with applicable hydrogen refueling station standards and laws. Once testing is done, the device will be moved; therefore there are no installation or construction activities involved. This project is therefore categorically exempt under CEQA Guidelines Section 15301 because it is expected to consist of the minor alteration of an existing facility that involves negligible or no expansion of existing or former use at the facility. This project is also categorically exempt under CEQA Guidelines Section 15306 as basic data collection, research, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Further, none of the exceptions listed in CEQA Guidelines Section 15300.2 apply to this project because the project does not involve cumulative impact of successive projects, does not involve any unusual circumstances, does not involve any scenic resources within a highway, will not involve a hazardous waste site located on a list compiled pursuant to Government Code Section 65962.5, and does not involve any changes to any historical resources.

- b) ☐ Agreement **IS NOT** exempt. (consult with the legal office to determine next steps)

Check all that apply

- ☐ Initial Study
☐ Negative Declaration
☐ Mitigated Negative Declaration
☐ Environmental Impact Report
☐ Statement of Overriding Considerations

H) List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)

Legal Company Name:	Budget
TBD	\$ 850,000.00
	\$ 0.00
	\$ 0.00

I) List all key partners: (attach additional sheets as necessary)

Legal Company Name:
National Renewable Energy Laboratory (NREL)

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
ARFVTP	FY 19/20	600.118I	\$850,000
Funding Source			\$
Funding Source			\$

R&D Program Area: Select Program Area TOTAL: \$

Explanation for "Other" selection

Reimbursement Contract #:

Federal Agreement #:



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K) Contractor's Contact Information

1. Contractor's Administrator/Officer

Name: Dalia Cotton
Address: 1001 I Street
City, State, Zip: Sacramento, CA 95814
Phone: 916-332-4184
E-Mail: dalia.cotton@arb.ca.gov

2. Contractor's Project Manager

Name: Banpreet Bhambra
Address: 1001 I Street
City, State, Zip: Sacramento, CA 95814
Phone: 916-324-0208
E-Mail: banpreet.bhambra@arb.ca.gov

L) Selection Process Used

- ☐ Solicitation Select Type Solicitation #: - - # of Bids: Low Bid ☐ No ☐ Yes
☐ Non Competitive Bid (Attach DGS-GSPD-09-007 <https://www.dgs.ca.gov/PD/Forms>)
☒ Exempt Interagency

M) Contractor Entity Type

- ☐ Private Company (including non-profits)
☐ CA State Agency (including UC and CSU)
☒ Government Entity (i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)

N) Is Contractor a certified Small Business (SB), Micro Business (MB) or DVBE?

If yes, check appropriate box(es): ☐ SB ☐ MB ☐ DVBE

O) Civil Service Considerations

- ☒ Not Applicable (Agreement is with a CA State Entity or a membership/co-sponsorship)
☐ Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER)
☐ The Services Contracted:
☐ are not available within civil service
☐ cannot be performed satisfactorily by civil service employees
☐ are of such a highly specialized or technical nature that the expert knowledge, expertise, and ability are not available through the civil service system.
☐ The Services are of such an:
☐ urgent
☐ temporary, or
☐ occasional nature
that the delay to implement under civil service would frustrate their very purpose.

Justification:



STATE OF CALIFORNIA

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P) Payment Method

1. ☐ Reimbursement in arrears based on:
 - ☐ Itemized Monthly ☐ Itemized Quarterly ☐ Flat Rate ☐ One-time
2. ☒ Advanced Payment
3. ☐ Other, explain:

Q) RetentionIs Agreement subject to retention? ☒ No ☐ YesIf Yes, Will retention be released prior to Agreement termination? ☐ No ☐ Yes**R) Justification of Rates**

N/A

S) Disabled Veteran Business Enterprise Program (DVBE)

1. ☒ Exempt (Interagency/Other Government Entity)
2. ☐ Meets DVBE Requirements DVBE Amount:\$ 0 DVBE %:
 - a. ☐ Contractor is Certified DVBE
 - b. ☐ Contractor is Subcontracting with a DVBE: Name of DVBE Company
3. ☐ Contractor selected through CMAS or MSA with no DVBE participation
4. ☐ Requesting DVBE Exemption (attach CEC 95)

T) Miscellaneous Agreement Information

1. Will there be Work Authorizations? ☒ No ☐ Yes
2. Is the Contractor providing confidential information? ☒ No ☐ Yes
3. Is the contractor going to purchase equipment? ☐ No ☒ Yes
4. Check frequency of progress reports
 - ☐ Monthly ☒ Quarterly ☐ Other...
5. Will a final report be required? ☐ No ☒ Yes
6. Is the Agreement, with amendments, longer than three years? If yes, why? ☐ No ☒ Yes

U) The following items should be attached to this CRF (as applicable)

- | | | |
|---|---|--|
| 1. Exhibit A, Scope of Work | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 2. Exhibit B, Budget Detail | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 3. DGS-GSPD-09-007, NCB Request | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 4. CEC 95, DVBE Exemption Request | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 5. CEQA Documentation | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |
| 6. Resumes | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |
| 7. CEC 105, Questionnaire for Identifying Conflicts | <input checked="" type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |

Agreement Manager_____
Date_____
Office Manager_____
Date_____
Deputy Director_____
Date

Exhibit A SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
1.1		Attend Kick-off Meeting
1.2		Critical Project Review (CPR) Meetings
1.3		Final Meeting
1.4		Quarterly Progress Reports
1.5		Final Report
1.6		Identify and Obtain Matching Funds
1.7		Identify and Obtain Required Permits
1.8		Obtain and Execute Subcontracts
2		Participate in the NREL Stakeholder Meetings
3	X	Solicitation, Scoring, and Subcontractor Selection
4		Mutual Agreement on Whether to Proceed
5		Award Subcontract
6		Build the HyStEP 2.0 Device
7		Operations Manual
8		Safety/Operations Training
9		Transport and Delivery of the HyStEP 2.0 Device
10		Verify, Commission and Start-Up the HyStEP 2.0 Device
11		Operate the HyStEP 2.0 Device and Collect Data
12		Project Fact Sheet

GLOSSARY

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

Term/ Acronym	Definition
ANSI	American National Standards Institute
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
Clean Transportation Program	Formerly known as Alternative and Renewable Fuel and Vehicle Technology Program
Contractor	California Air Resources Board
CPR	Critical Project Review
FCEV	Fuel Cell Electric Vehicle
FTD	Fuels and Transportation Division
HAZOP	Hazard and Operability Analysis
HyStEP 2.0	Hydrogen Station Equipment Performance device
NREL	National Renewable Energy Laboratory
SOC	State of Charge

Background

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program, formerly known as the Alternative and Renewable Fuel and Vehicle Technology 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 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the Clean Transportation Program through January 1, 2024. The Clean Transportation Program has an annual budget of approximately \$100 million and provides 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.

This Interagency Agreement with the California Air Resources Board (CARB or Contractor) will result in a new hydrogen refueling station testing device used to verify compliance with SAE International J2601 “Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles”. CARB expects to use the device to test up to 15 hydrogen stations per year to confirm hydrogen stations meet these fueling protocol requirements.

Problem Statement:

The testing and performance validation process used for hydrogen refueling stations involves public agencies, hydrogen station developers, system integrators, and automotive original equipment manufacturers. The process typically includes testing, adjusting, and retesting hydrogen refueling stations for compliance with the SAE International J2601 “Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles” and other standards.

The State of California will use the Hydrogen Station Equipment Performance (HyStEP) 2.0 device that is designed, built, commissioned, and deployed under this agreement for hydrogen refueling station testing and performance validation. The State of California presently uses an earlier HyStEP device version that was designed, built, and commissioned in 2015 and, by contrast, the new device will include state of the art equipment and apply the most recently promulgated standards.

Goals of the Agreement:

The goal is for the Contractor to build, commission, transport, and deploy a HyStEP 2.0 device.

The HyStEP 2.0 device shall:

- Meet or exceed the standards for testing and evaluating the use of hydrogen refueling station protocols specified in the most recent version of the SAE International J2601, Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles, using the most recent version of the American National Standards Institute (ANSI)/CSA HGV 4.3 as a test method. The tests shall be performed at the hydrogen refueling station site.
- Meet requirements for venting and filling the HyStEP 2.0 device’s onboard hydrogen storage tanks simultaneously while at a hydrogen refueling station site to reduce the overall time needed to test each hydrogen refueling station.

Objectives of the Agreement:

The objectives of this Agreement are to:

- Participate in NREL Stakeholder Meetings to obtain stakeholder input.
- Develop and release a competitive solicitation to build a new HyStEP 2.0 device.
- Build a HyStEP 2.0 device.
- Verify and accept the HyStEP 2.0 device.
- Commission and operate the HyStEP 2.0 device.

- Collect data received from each station that is tested using the HyStEP 2.0 device.

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 Contractor prior to the meeting.

The Contractor shall:

- Attend a “Kick-Off” meeting with the CAM, the Commission Agreement Officer (CAO), and a representative of the California Energy Commission (CEC) Accounting Office. The Contractor shall bring their Project Manager, Agreement Administrator, Accounting Officer, and any others determined necessary by the Contractor or specifically requested by the CAM to this meeting.
- Discuss the following administrative and technical aspects of this Agreement:
 - Agreement Terms and Conditions
 - Critical Project Review (Task 1.2)
 - Match fund documentation (Task 1.6) No reimbursable work may be done until this documentation is in place.
 - Permit documentation (Task 1.7)
 - Subcontracts needed to carry out project (Task 1.8)
 - The CAM’s expectations for accomplishing tasks described in the Scope of Work
 - An updated Schedule of Deliverables and Due Dates
 - Quarterly Progress Reports (Task 1.4)
 - Technical Deliverables (Deliverable Guidelines located in Section 5 of the Public/Government Entity Special Terms and Conditions)
 - Final Report (Task 1.5)

Contractor Deliverables:

- Updated Schedule of Deliverables
- Updated List of Match Funds
- Updated List of Permits

Commission Agreement Manager Deliverable:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

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

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

Meeting participants include the CAM and the Contractor 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 Contractor. These meetings generally take place at the CEC, but they may take place at another location or remotely.
- Send the Contractor 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, deliverables, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see section 8 of the Public/Governmental Entity Special 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 Contractor with a written determination in accordance with the schedule. The written response may include a requirement for the Contractor to revise one or more product(s) that were included in the CPR.

The Contractor 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 deliverables identified in this scope of work. The Contractor shall submit these documents to the CAM and any other designated reviewers in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

CAM Deliverables:

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

Contractor Deliverable(s):

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Contractor 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 Contractor, the Commission Grants Office Officer, 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 and the Grants Officer 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 deliverables)
- Need to document Contractor’s disclosure of “subject inventions” developed under the Agreement
- “Surviving” Agreement provisions
- Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

Deliverables:

- Written documentation of meeting agreements
- Schedule for completing closeout activities

Task 1.4 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 Contractor shall:

- Prepare a Quarterly Progress Report which summarizes all Agreement activities conducted by the Contractor for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the CAM within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Public/Governmental Entity Special Terms and Conditions of this Agreement.
- In the first Quarterly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed

award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Public/Governmental Entity Special Terms and Conditions of this Agreement.

Deliverable:

- Quarterly Progress Reports

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving the Agreement's goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

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. If the Contractor has obtained confidential status from the CEC and will be preparing a confidential version of the Final Report as well, the Contractor shall perform the following activities for both the public and confidential versions of the Final Report.

The Contractor shall:

- Prepare an Outline of the Final Report, if requested by the CAM.
- Prepare a Final Report 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 one bound copy of the Final Report with the final invoice.

Deliverables:

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

Task 1.6 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 Contractor may utilize match funds for this task. Match funds shall be spent concurrently or in advance of CEC funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated commitments obtained before the Contractor can incur any costs for which the Contractor will request reimbursement.

The Contractor 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 Contractor 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.

Deliverables:

- 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 1.7 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 Contractor shall budget match funds, if applicable, for any expected expenditures associated with obtaining permits.

The Contractor 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 Contractor 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.

Deliverables:

- 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 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality deliverables and to procure subcontractors required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Contractor's own procurement policies and procedures. It will also provide CEC an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable

cost principles.

The Contractor shall:

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the CAM for review.
- Submit a final copy of the executed subcontract.
- If Contractor decides to add new subcontractors, then the Contractor shall notify the CAM.

Deliverables:

- Letter describing the subcontracts needed, or stating that no subcontracts are required
- Draft subcontracts
- Final subcontracts

TECHNICAL TASKS

TASK 2: PARTICIPATE IN NREL STAKEHOLDER MEETINGS

The goal of this task is for the Contractor and the CEC to participate in meetings led by NREL to obtain stakeholder input. These meetings would be to request non-proprietary input about the technical performance and expectations of the HyStEP 2.0 device. NREL will use the information gathered during these meetings to complete NREL's final design for HyStEP 2.0 under CEC Agreement number 600-15-001.

The Contractor shall:

- Participate in five to 10 in-person or web-based stakeholder meetings about topics that include, but are not limited to, the following:
 - The technical performance and expectations of the HyStEP 2.0 device,
 - The design and engineering of the HyStEP 2.0 device,
 - The off-the-shelf equipment to be reflected in the design of the HyStEP 2.0 device and used during the build of the HyStEP 2.0 device,
 - How to use the HyStEP 2.0 device in the field at hydrogen refueling stations,
 - How to conduct ANSI/CSA HGV 4.3 testing to validate SAE International J2601 fueling protocols to meet the required state of charge required in the CEC Grant Funding Opportunity (GFO) 19-602.
 - How the device will comply with related standards such as the electrical code, pressure vessel code, as appropriate and practicable, for commissioning.
 - The selection of the location of at least two existing hydrogen refueling stations located in California where the HyStEP 2.0 device will be validated, in addition to the validation activity at NREL in Golden, Colorado.

Deliverables:

- None for this Task.

TASK 3: SOLICITATION, SCORING, AND SUBCONTRACTOR SELECTION

The goal of this task is for the Contractor to develop and deploy a competitive solicitation with a maximum award amount and to score the applications. An awardee would become the Contractor's subcontractor.

The Contractor shall:

- Develop a competitive solicitation according to the Contractor's contracting manual, pursuant to a competitive bidding process that seeks at least three (3) bids from responsible bidders. In the case three (3) bids are not received, CARB Administrative Services Division (ASD) and Department of General Services (DGS) processes will be followed.

The solicitation must meet the following minimum specifications for the HyStEP 2.0 device:

- Vent and fuel the hydrogen storage tanks, simultaneously,
- Achieve accuracy and tolerances of tank and measurement devices that meet standards that include the most recent version of the ANSI/CSA International Hydrogen Gas Vehicles (HGV) 4.3 test method for evaluating hydrogen stations for their compliance with the SAE International J2601 standard, Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles.
- Be capable of testing whether hydrogen refueling stations comply with the most recent version of SAE J2601 and HGV 4.3,
- Be capable of testing back-to-back fueling capabilities (H70-T40 fills),
- Be capable of testing hydrogen fuel cell electric vehicle (FCEV) tank sizes of 2 – 4 kg, 4 – 7 kg, 7 – 10 kg, and greater than 10 kg, and
- Release the competitive solicitation.
- Score applications and recommend a proposed awardee (Subcontractor) to build a HyStEP 2.0 device in accordance with solicitation requirements. Provide copies of the applications and resulting scores to the CAM. The awardee's proposed HyStEP 2.0 device must meet the minimum specifications listed above.
- Write a justification for the proposed awardee and submit to the CAM.
- Participate in a Critical Project Review Meeting. See Task 1.2 for more information.

Deliverables:

- Copy of final solicitation document
- Copies of applications and scores
- Justification for proposed awardee selection
- CPR Report (as described in Task 1.2)

TASK 4: MUTUAL AGREEMENT ON WHETHER TO PROCEED

The goal of this task is to seek mutual agreement between Contractor and CEC on whether to proceed with the remaining tasks in this Agreement based on the proposed awardee under Task 3 and whether the HyStEP 2.0 device is needed.

The Contractor shall:

- Meet with the CAM to determine if there is mutual agreement on whether to proceed with the Agreement project.
- Provide written determination with justification to CAM on whether CARB wants to proceed with the proposed awardee and whether the HyStEP 2.0 device is needed.
- If necessary, identify and allocate additional match share funding to complete the project.

Contractor Deliverables:

- Written determination with justification on whether to proceed based on the proposed awardee and whether the HyStEP 2.0 device is needed.
- Documentation of availability of additional match share funds (if necessary).

The CEC shall:

- Meet with CARB representatives to determine whether there is mutual agreement on whether to proceed with the Agreement project.
- Provide written determination with justification to CARB on whether CEC wants to proceed with the Agreement project.
- If mutually agreed, CAM will provide written authorization to CARB to proceed with Agreement project.
- If necessary, process an amendment to add match share funding to complete the Agreement project.

CEC Deliverables:

- Written determination with justification on whether to proceed
- If mutually agreed, written authorization to proceed
- Agreement amendment (if necessary)

Contractor is not authorized to proceed to Task 5 unless written authorization is received from CEC to continue with the project.

Contractor may submit an invoice requesting a single lump-sum advance payment upon the condition that Contractor and CEC mutually agree to continue the Agreement project, as described in Task 4. No grant funds shall be disbursed prior to such mutual agreement.

TASK 5: AWARD SUBCONTRACT

The goal of this task is for the Contractor to award the subcontract proposed under Task 3.

The Contractor shall:

- Award and execute a subcontract to build the HyStEP 2.0 device.

Deliverables:

- Copy of executed subcontract

TASK 6: BUILD THE HYSTEP 2.0 DEVICE

The goal of this task is for the Contractor to build the HyStEP 2.0 device and obtain a one-year warrantee for the device.

The Contractor shall:

- Prepare a list and obtain all materials, supplies, and equipment needed to build the HyStEP 2.0 device.
- Build the HyStEP 2.0 device and ensure that it is built to the NREL Final Design.
- Provide photographs of the completed HyStEP 2.0 device.
- Obtain a warrantee of the HyStEP 2.0 device for at least one year and provide a copy of it to the CEC.

Deliverables:

- List of the materials, supplies, and equipment needed to build the HyStEP 2.0 device
- Photographs of the built HyStEP 2.0 device
- Warrantee of the HyStEP 2.0 device

TASK 7: OPERATIONS MANUAL

The goal of this task is for the Contractor to develop a manual for operating the HyStEP 2.0 device.

The Contractor shall:

- Develop an Operations Manual that will, at a minimum, include the following aspects:
 - Describe how to safely maintain the HyStEP 2.0 device.
 - Describe how to safely set up and take down the HyStEP 2.0 device.
 - Describe how to safely use the device to test hydrogen refueling stations for compliance with the most recent version of SAE International J2601 using ANSI/CSA HGV 4.3 as a test method.
 - Describe how to safely transport the HyStEP 2.0 device.
 - Describe any permits needed to operate the HyStEP 2.0 device.

Deliverables:

- Operations Manual

TASK 8: SAFETY/OPERATIONS TRAINING

The goal of this task is for the Contractor to develop safety/operations training materials and provide safety/operations training to its staff.

The Contractor shall:

- Develop safety/operations training materials. Provide a copy of the materials to the CAM.
- Provide safety/operations training to staff before the Contractor commences operating the HyStEP 2.0 device to test hydrogen refueling stations. Provide written notice to the CAM that staff have completed training.

Deliverables:

- Safety/operations training materials
- Final Operations manual/procedure
- Written notice to the CAM that staff have completed training

TASK 9: TRANSPORT AND DELIVERY OF THE HYSTEP 2.0 DEVICE

The goal of this task is for the Contractor to transport and deliver the HyStEP 2.0 device to NREL's facility in Colorado and, after verification, to transport the device to California.

The Contractor shall:

- Transport and deliver the HyStEP 2.0 device to NREL's facility in Colorado. Notify the CAM in writing of the delivery of the HyStEP 2.0 device.
- After successful verification (see Task 11), transport and deliver to a location in California determined by the Contractor. Notify the CAM in writing of the verification and the delivery.
- Provide photographs to the CAM showing safe delivery of the HyStEP 2.0 device to Colorado and to California. If the HyStEP 2.0 device is damaged, Contractor shall describe the damage and provide photographs of the damage.

Deliverables:

- Written notification of the transport and delivery of the completed HyStEP 2.0 device to NREL's facility in Colorado
- Photographs of the HyStEP 2.0 device as it was delivered to NREL's facility in Colorado
- Written notification of the delivery of the completed HyStEP 2.0 device to California
- Photographs of the HyStEP 2.0 device as it was delivered to California
- Description of damage and photographs of damage (if applicable)

TASK 10: VERIFY, COMMISSION AND START UP THE HYSTEP 2.0 DEVICE

The goal of this task is for the Contractor to verify the HyStEP 2.0 device meets the requirements of the NREL Final Design for the HyStEP 2.0 device and commission the HyStEP 2.0 device.

The Contractor shall:

- Verify that the HyStEP 2.0 device meets the requirements of the NREL Final Design for the HyStEP 2.0 device. Notify the CAM in writing of verification.
- Provide a description of the process used to verify that the HyStEP 2.0 device meets the requirements of the NREL Final Design for the HyStEP 2.0 device.
- Commission and start up the HyStEP 2.0 device.
- Provide a description of the process used to commission and start up the HyStEP 2.0 device.
- Collect all data from commissioning and start up the HyStEP 2.0 device.
- Analyze the commissioning and start up data of the HyStEP 2.0 device.
- Share the verification and commissioning and start up data of the HyStEP 2.0 device with the CAM, station developers, and other stakeholders.

Deliverables:

- Written notification of the verification of the HyStEP 2.0 device
- Description of the process used to verify the HyStEP 2.0 device
- Description of the processes used to commission and start-up the HyStEP 2.0 device

TASK 11: OPERATE THE HYSTEP 2.0 DEVICE AND COLLECT DATA

The goal of this task is to enable the Contractor to operate the HyStEP 2.0 device, as needed, and collect test data at stations funded by the Clean Transportation Program or any public hydrogen fueling station.

The Contractor shall:

- Coordinate with the CAM on the ongoing hydrogen refueling station testing schedule. Provide written notification after testing is complete at each CEC funded station tested using the HyStEP 2.0 device.
- Operate, as needed, the HyStEP 2.0 device to evaluate and verify conformance of stations with SAE International J2601, Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles using ANSI/CSA HGV 4.3 as a test method.
- Collect all data received from each station that is tested using the HyStEP 2.0 device. Provide the data to the CAM for each CEC funded station tested using the HyStEP 2.0 device.
- Analyze data at stations in the field when the HyStEP 2.0 device is used at hydrogen refueling stations.
- Ensure that Contractor staff have the skills and education to procure the required standards and to follow the most recent versions of the ANSI/CSA HGV 4.3 and SAE International J2601 standards and guidelines when testing hydrogen stations with the HyStEP 2.0 device.
- House, maintain, and insure the HyStEP 2.0 device.

Deliverables:

- Written notification after each station testing is complete.
- Testing data obtained from each hydrogen station fueling protocol testing at CEC funded stations.

TASK 12: 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 Contractor 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.

Deliverables:

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

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CALIFORNIA AIR RESOURCES BOARD (CARB)

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement 600-20-008 with the California Air Resources Board (CARB) for an \$850,000 contract to build, commission, and operate the Hydrogen Station Equipment Performance device on behalf of the CEC. CARB will use the device to evaluate safety and performance of hydrogen refueling stations before opening to the public; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on June 9, 2021.

AYE:

NAY:

ABSENT:

ABSTAIN:

Patricia Carlos
Secretariat