STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 02/13) CALIFORNIA ENERGY COMMISSION

New Agreement ARV-14-011 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Phil Cazel	27	916-653-1590

Recipient's Legal Name	Federal ID Number
HyGen Industries, LLC	95-4679723

Title of Project
Rohnert Park, Orange, and Pacific Palisades Hydrogen Refueling Stations

Term and Amount	Start Date	End Date	Amount
	7 / 22 / 2014	12 / 31 / 2016	$ 5,306,814

Business Meeting Information			
☐ ARFVTP agreements under $75K delegated to Executive Director.			
Proposed Business Meeting Date	07 / 22 / 2014	☐ Consent	☒ Discussion
Business Meeting Presenter	Phil Cazel	Time Needed:	5 minutes
Please select one list serve. Altfuels (AB118- ARFVTP)			
Agenda Item Subject and Description			
Proposed resolution approving Grant Agreement ARV-14-011 with HyGen Industries, LLC for $5,306,814 to design, install, and operate 3 hydrogen refueling stations in the cities of Rohnert Park, Orange, and Pacific Palisades. The stations will provide 100% renewable hydrogen from on-site electrolyzers. This agreement will increase hydrogen refueling infrastructure to support the expected roll-out of hydrogen fuel cell vehicles.			

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)):
   Explain why Agreement is not considered a "Project":
   Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because .

2. If Agreement is considered a "Project" under CEQA:
   ☒ a) Agreement **IS** exempt. (Attach draft NOE)
   ☐ Statutory Exemption. List PRC and/or CCR section number:
   ☒ Categorical Exemption. List CCR section number: Cal. Code Regs., tit. 14, sections 15301 ("Existing Facilities"); 15303 ("New Construction or Conversion of Small Structures"); 15304 ("Minor Alterations to Land").
   ☐ Common Sense Exemption. 14 CCR 15061 (b) (3)

   Explain reason why Agreement is exempt under the above section:
   This project will involve the installation of a containerized electrolyzer hydrogen generator, hydrogen storage tanks, and compression and dispensing equipment at each of 3 locations in California. The use of 100% renewable power combined with onsite hydrogen generation via electrolysis will produce up to 130 kg/day of hydrogen for use in fuel cell electric vehicles which will displace use of gasoline with less polluting hydrogen.

   At each of the 3 locations, the project will be installed on the grounds of a previously existing gas station facility. Equipment to be installed as part of the project will cover an area of less than 1000 square feet and include an assembled rack of storage tanks that combined, will hold up to 105 kg of hydrogen and a hydrogen dispenser for filling fuel cell electric vehicles at pressures of 350 bar and 700 bar. A minimal amount of trenching to facilitate underground electrical and hydrogen gas lines will be necessary. The total excavation area will be less than 1,000 square feet. There will be no trees removed as part of project construction. Additional information regarding the applicable zoning and trenching at each of the locations is as follows.

   5060 Redwood Drive, Rohnert Park, CA: The project is located on a commercially zoned gasoline station site. The subject property is adjacent to a predominantly residential area. 10 to 50 feet of trenching is required.

   5281 West Sunset Blvd., Pacific Palisades, CA: The project is located on a commercially zoned gasoline station site. The subject property is in a busy commercial area. 10 to 50 feet of trenching is required.

   8544 East Chapman Ave., Orange, CA: The project is located on a commercially zoned gasoline station site. The subject property is in a busy commercial area. 10 to 50 feet of trenching is required.

   Cal. Code Regs., tit. 14, sect. 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of use beyond that existing at the time of the lead agency's determination, are categorically exempt from the provisions of the California Environmental Quality Act. The proposed project adds equipment to each existing station that covers an area which is are less than 1,000 square feet, with an excavation area of no more than 1,000 square feet, also at each existing station location. This square footage is far less than that specified in examples provided in the Regulations (i.e., 14 C.C.R. § 15301(e)) of minor additions to existing structures. Additionally, the nature of the activities proposed are the same as those already existing (i.e. vehicle refueling). Because all proposed sites house existing gas stations; the proposed addition of hydrogen refueling facilities will not significantly expand the use beyond that already existing; and the square footage of equipment installation is relatively small, the project falls within section 15301 and will not have a significant effect on the environment.

   Cal. Code Regs., tit. 14, sect. 15303 provides that projects which consist of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure, are categorically exempt from the provisions of the California Environmental Quality Act. The proposed project consists of installation of small new equipment, including a rack of hydrogen storage tanks with an assembled capacity of up to 105 kg, and compression and dispensing equipment, at each site. Therefore, the proposed project falls within section 15303 and will not have a significant effect on the environment.

Cal. Code Regs., tit. 14, sect. 15304 provides that projects which consist of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes, are categorically exempt from the provisions of the California Environmental Quality Act. For the installation of the equipment in these projects there will be between 5 and 50 feet of trenching per location to connect storage and compression equipment to dispensers. No trees will be removed and the surface will be restored. This reflects exactly the example given in section 15304(f). Therefore, the proposed project falls within section 15304 and will not have a significant effect on the environment.

☐ 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

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

Legal Company Name:	Budget
See attachment for list of subcontractors	$
	$
	$

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

Legal Company Name:

Budget Information

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTF	12/13	601.118EH	$4,250,323
ARFVTF	13/14	601.118FH	$1,056,491
Funding Source			$
Funding Source			$
Funding Source			$
R&D Program Area: N/A		TOTAL:	$5,306,814
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Recipient's Administrator/ Officer				Recipient's Project Manager			
Name:	Paul Staples			Name:	Paul Staples		
Address:	P.O. Box 6911			Address:	P.O. Box 6911		
City, State, Zip:	Eureka, CA 95502			City, State, Zip:	Eureka, CA 95502		
Phone:	707-667-5329	Fax:	- -	Phone:	707-667-5329	Fax:	- -
E-Mail:	h24u@hygen.com			E-Mail:	h24u@hygen.com		

Selection Process Used

☒ Competitive Solicitation
☐ First Come First Served Solicitation

Solicitation #: PON-13-607

The following items should be attached to this GRF

1. Exhibit A, Scope of Work		☒ Attached
2. Exhibit B, Budget Detail		☒ Attached
3. CEC 105, Questionnaire for Identifying Conflicts		☒ Attached
4. Recipient Resolution	☒ N/A	☐ Attached
5. CEQA Documentation	☐ N/A	☒ Attached

Agreement Manager	Date	Office Manager	Date	Deputy Director	Date

List of Subcontractors (major and minor) and equipment vendors:

Legal Company Name:	Budget Amount
Abovo Environmental	$177,441
TBD - Civil Engineering Subcontractor	$147,429
TBD - Structural/Architectural Subcontractor	$273,732
TBD – Electrical Subcontractor	$114,090
TBD – Piping Subcontractor	$167,685

EXHIBIT A

SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Refueling Station Design and Engineering
3	X	Station Installation
4		Commissioning, Becoming Operational, and Continuing Operation
5		Data Collection and Analysis

GLOSSARY

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

Term/ Acronym	Definition
AFDC	Alternative Fuels Data Center
ARFVTP	Alternative and Renewable Fuel and Vehicle Technology Program
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
FCEV	Fuel Cell Electric Vehicle
FTD	Fuels and Transportation Division
LCFS	Low Carbon Fuel Standard
M&C	Monitoring and Control
NAAQS	National Ambient Air Quality Standards
NREL	National Renewable Energy Laboratory
O&M	Operations and Maintenance
OM&M	Operations, Monitoring and Maintenance
PLC	Programmable Logic Controller
Recipient	HyGen Industries, LLC
SAE	Society of Automotive Engineers International
ZEV	Zero Emission Vehicle

BACKGROUND:

Assembly Bill (AB) 118 (Nùñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). The statute authorizes the California Energy Commission (Energy Commission) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024, and specifies that the Energy Commission allocate up to $20 million per year (or up to 20 percent of each fiscal year's funds) in funding for hydrogen station development until at least 100 stations are operational. The Energy Commission has an annual program budget of approximately $100 million and provides financial support for projects that:

- Develop and improve alternative and renewable low-carbon fuels;
- Optimize alternative and renewable fuels for existing and developing engine technologies;
- Produce alternative and renewable low-carbon fuels in California;
- Decrease, on a full fuel cycle basis, the overall impact and carbon footprint of alternative and renewable fuels and increase sustainability;
- Expand fuel infrastructure, fueling stations, and equipment;
- Improve light-, medium-, and heavy-duty vehicle technologies;
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets;
- Expand infrastructure connected with existing fleets, public transit, and transportation corridors; and
- Establish workforce training programs, conduct public education and promotion, and create technology centers.

The Energy Commission issued solicitation PON-13-607 to develop infrastructure necessary to dispense hydrogen transportation fuel and to support hydrogen refueling operations prior to large-scale roll-out of fuel cell vehicles. To be eligible for funding under PON-13-607, projects must also be consistent with the Energy Commission's ARFVT Investment Plan, updated annually. In response to PON-13-607, HyGen Industries, LLC (Recipient) submitted application numbers 92,103, and 105, which were proposed for funding in the Energy Commission's Notice of Proposed Awards on May 1, 2014. PON-13-607 and Recipient's applications 92,103, and 105 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 the Energy Commission's award, the Energy Commission'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

In general, California has an urgent need to reduce greenhouse gas and criteria pollutant emissions, and to reduce consumption of petroleum-derived fuels. California state mandates such as the Zero Emissions Vehicle (ZEV) mandate, the Low Carbon Fuel Standard (LCFS), and the National Ambient Air Quality Standards (NAAQS) require significant effort in order to improve the health and safety of the state's citizens. Specifically, California requires a comprehensive network of hydrogen refueling stations that will support the growing fleet of Fuel Cell Electric Vehicles (FCEVs) that will be introduced in significant numbers in 2015. ARFVTP

funding will accelerate the development of this hydrogen refueling station network, and the Recipient's approach will maximize greenhouse gas (GHG) emission reductions by ensuring that the hydrogen produced by its stations has zero carbon intensity (i.e., carbon-free footprint).

Other issues include the following:

> Market: The primary barrier for widespread hydrogen implementation is a limited supply infrastructure. Without a substantial and convenient refueling infrastructure, customers are less likely to purchase hydrogen-fueled vehicles. Fuel providers and public agencies, through investments in refueling stations, are gradually mitigating this barrier. Successful implementation of Recipient's hydrogen refueling stations will greatly accelerate market penetration as FCEVs enter the marketplace under ZEV mandates.
>
> Cost and Financial Hurdles: New hydrogen refueling stations are expensive to install, operate, and maintain. Since there is a limited customer base at this time, public support is necessary to jump-start the market. Refueling stations are needed in order to sell FCEVs; however, the vehicles will not penetrate the market if customers do not have accessible refueling stations at convenient locations statewide.

Goals of the Agreement

The goals of this Agreement are to accelerate the availability of publicly accessible hydrogen as a transportation fuel throughout California, to reduce greenhouse gas and criteria pollutant emissions, and to increase the displacement of petroleum-derived fuels with 100% clean, renewable hydrogen.

Objectives of the Agreement

Key objectives to support these goals include:

- Design, install, and commission three 100% renewable hydrogen stations at the following locations:
    - 5060 Redwood Drive, Rohnert Park, CA 94928
    - 8544 East Chapman Avenue, Orange, CA 92869
    - 15281 West Sunset Blvd., Pacific Palisades, CA 90272
- Ensure that the new stations meet all applicable codes and standards for permitting; safety; and hydrogen dispensing standards.
- Contribute to the knowledge base regarding the development and operation of hydrogen infrastructure through progress reports and data collection.
- Implement a 24/7 remote station monitoring system, with live technical support to field customer questions, monitor system operations, and conduct system checks as needed.

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 with the CAM, the Commission Agreement Officer (CAO), and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated 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 Products and Due Dates
    - Monthly Progress Reports (Task 1.4)
    - Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
    - Final Report (Task 1.5)

Recipient Products:

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

CAM Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

CPRs provide the opportunity for frank discussions between the Energy Commission and the Recipient. 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, 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) hydrogen lead, other Energy Commission staff and Management as well as other individuals selected by the CAM to provide support to the Energy Commission.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location.
- 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 Energy Commission 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, 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 Energy Commission funds (Options)
  - Energy Commission's request for specific "generated" data (not already provided in Agreement products)
  - Need to document Recipient'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.

Products:

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

Task 1.4 Monthly 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 Monthly 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. 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 Terms and Conditions of this Agreement.

- Monthly Progress Reports shall include new hydrogen quality test results at least once every 6 months, and more frequently if the hydrogen lines are exposed to contamination due to maintenance or other activity. (See requirements in PON-13-607 Section IV. Subsection A.)

- Monthly Progress Reports shall also include the station and dispenser compliance with Society of Automotive Engineers International (SAE) Technical Information Report (TIR) J2601: 2010, "Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles" (general requirements and operating conditions for fuel cell vehicles) until which time the SAE J2601 Standard is published. Thereafter, the station(s)/dispenser(s) shall meet the requirements of the standard (www.sae.org). Stations shall have communications available for H70 fueling according to the SAE J2799 Standard. Should the SAE J2601 Standard not be available, the station(s)/dispensers(s) shall be capable of providing SAE TIR J2799: 2007, "70 MPa Compressed Hydrogen Surface Vehicle Fueling Connection Device and Optional Vehicle to Station Communications".

- Monthly Progress Reports shall also include the amount of hydrogen dispensed per month in kilograms.

- In the first Monthly 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 Terms and Conditions of this Agreement.

Product:

- Monthly 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 Recipient has obtained confidential status from the Energy Commission 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.

The Recipient 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.

Products:

- 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 Energy Commission budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of Energy Commission funds for each task during the term of this Agreement. 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. 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 1.7 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 Energy Commission budget for this task will be zero dollars, the Recipient shall 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 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality products and to procure subcontractors 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. It will also provide the Energy Commission 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 Recipient 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 Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

Products:

- Draft subcontracts
- Final subcontracts

TECHNICAL TASKS

TASK 2: REFUELING STATION DESIGN AND ENGINEERING

The goal of this task is to perform the design and engineering tasks that are required for each hydrogen refueling station, including hydrogen production, storage, dispensing, and monitoring.

The hydrogen refueling stations in this Agreement are:

- 5060 Redwood Drive, Rohnert Park, CA 94928
- 8544 East Chapman Avenue, Orange, CA 92869
- 15281 West Sunset Blvd., Pacific Palisades, CA 90272

The Recipient shall:

- Design and engineer each station according to individual location details and selected station components.
- Prepare a plot plan for each station.
- Develop a monitoring and control (M&C) system for each station that enables both local and remote monitoring and corrective actions to be taken to maximize safety to operating personnel and the community.
- Develop a master station control center that interfaces with the M&C system to remotely monitor station operation status.
- Prepare an equipment list for each hydrogen station including, but not limited to, a description of each item necessary for complete installation and operationality, test protocols and codes applicable to each item, and cost estimates or bids for each item.
- Procure renewable electrical power. This power will be from 100% renewable source pathways.

Products:

- Design and engineering report
- Copy of plot plan
- Equipment list for each hydrogen station
- Copy of contracts for 100% renewable power
- Summary report of M&C and master station control center development

TASK 3: STATION INSTALLATION

The goal of this task is to procure, install, and commission the equipment for each hydrogen refueling station.

The Recipient shall:

- Perform site modifications including demolition, trenching, paving, electrical, piping, and civil work to allow installation of hydrogen production, storage, and dispensing equipment.
- Procure and install hydrogen station components at each station site.
- Prepare an interim construction progress report that documents progress at each station location. This report shall include a list of activities performed, discussion of the activities and any significant issues encountered, and how any issues were addressed. The report shall include photographs of the completed station.

Products:

- Interim construction progress report
- Photographs of installed stations

[CPR WILL BE HELD DURING THIS TASK. See Task 1.2 for details]

TASK 4: COMMISSIONING, BECOMING OPERATIONAL, AND CONTINUING OPERATION

The goals of this task are to test, commission and make operational the hydrogen refueling stations. For each station, the operational date is defined as the date by which all of the following are completed: 1) the hydrogen fuel supply and all station/dispenser components are installed; 2) all required permits from local agencies are received; 3) the station has successfully completed a hydrogen quality test as specified in PON-13-607 Section IV.A; 4) the station has successfully fueled one fuel cell vehicle with hydrogen; and 5) the station is open to the public.

The Recipient shall:

- Prepare an Operations and Maintenance (O&M) Manual for each station. This manual shall cover best practices for the safe and efficient operation of each station in accordance with applicable performance requirements, and as required by station component manufacturers. The manual shall also delineate all consumable supplies and replacement intervals, all periodic maintenance required, and procedures to respond to remote warnings detected by the station's monitoring and control system interface.
- Perform station operation, maintenance, and monitoring in accordance with the Operations and Maintenance Manual.
- Provide training to the station operators.
- Commission, test and verify performance of the hydrogen refueling stations, and complete all qualification testing required by PON-13-607 (Section IV. Minimum Technical Requirements).
- Ensure that each station shall have a minimum daily fueling capacity of 130 kilograms. The station must be able to deliver the rated daily capacity over a 12 hour period. The average daily station capacity (kg/day) shall be the total kg of hydrogen that can be delivered to 7 kg-capacity fuel cell vehicles according to the SAE J2601, over a 12 hour period.
- **Make all stations operational by October 31, 2015.**
- For each station provide written notification to the CAM that the station has become operational in accordance with the operational date definition. Written notification shall include: 1) The date and time each station has fully met the operational date definition; 2) A listing of the qualification testing performed; and 3) The results of those tests.
- Install digital video surveillance cameras to monitor hydrogen dispenser, storage gauges, and valves.
- Install a communications system enabling a remote operator to assist customers at the hydrogen dispenser.
- Program custom interface between dispenser PLC, electrolyzer PLC, and Recipient's monitoring application.

- Conduct final system check to ensure all station remote monitoring systems are fully operational, including Energy Commission staff remote viewing access.
- List each station with all appropriate entities (e.g., California Fuel Cell Partnership (CaFCP) Station Map and Alternative Fuels Data Center (AFDC)) that track and map hydrogen station locations, thus ensuring that the public has maximum access.

Products:

- Written notification to the CAM as each hydrogen refueling station becomes operational
- Draft Operations and Maintenance Manual
- Final Operations and Maintenance Manual
- Summary report of monitoring and communications equipment installation and testing
- List of entities where station can be tracked and mapped

Task 5: DATA COLLECTION AND ANALYSIS

The goal of this task is to collect operational data from the project, to analyze that data for economic and environmental benefits, and to include the data and analysis in the Final Report. The NREL Data Collection Tool spreadsheets shall be used for data collection.

The Recipient shall:

- Develop a plan for data collection according to the National Renewable Energy Laboratory (NREL) Data Collection Tool.
- Troubleshoot any issues identified.
- Collect 12 months of throughput, usage, and operations data from the project including, but not limited to:
    - Maximum capacity of the new fueling system
    - Gallons of gasoline and/or diesel fuel displaced (with associated mileage information)
    - Expected air emissions reduction, for example:
        - Non-methane hydrocarbons
        - Oxides of nitrogen
        - Non-methane hydrocarbons plus oxides of nitrogen
        - Particulate Matter
        - Formaldehyde
    - Specific jobs and economic development resulting from this project
- Identify any current and planned use of renewable energy at the facility.
- Identify the source of the alternative fuel.
- Describe any energy efficiency measures used in the facility that may exceed Title 24 standards in Part 6 of the California Code Regulations.

- Provide data on potential job creation, economic development, and increased state revenue as a result of expected future expansion.
- 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 Energy Commission with actual project performance and accomplishments.
- Complete the NREL Data Collection Tool for each quarter and submit to the CAM.
- Collect data, information, and analysis described above and include in the Final Report.

Products:

- Quarterly reporting that complies with NREL Data Collection Tool spreadsheets
- Data collection information and analysis will be included in the Final Report

RESOLUTION NO: 14-0722

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: HYGEN INDUSTRIES, LLC

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

RESOLVED, that the Energy Commission approves Agreement ARV-14-011 from PON-13-607 with **HyGen Industries, LLC** for a **$5,306,814** grant to design, install, and operate 3 hydrogen refueling stations in the cities of Rohnert Park, Orange, and Pacific Palisades. The stations will provide 100% renewable hydrogen from on-site electrolyzers. This agreement will increase hydrogen refueling infrastructure to support the expected roll-out of hydrogen fuel cell vehicles; and

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

CERTIFICATION

The undersigned Secretariat to the Commission 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 California Energy Commission held on July 22, 2014.

AYE: [List of Commissioners]
NAY: [List of Commissioners]
ABSENT: [List of Commissioners]
ABSTAIN: [List of Commissioners]

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Harriet Kallemeyn,
Secretariat