

**CONTRACT REQUEST FORM (CRF)**

CEC-94 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

A) New Agreement 600-18-002 (To be completed by CGL Office)

600 Fuels and Transportation Division		Phil Cazel	27	916-653-1590
The Regents of the University of California on behalf of the Irvine Campus				95-2226406
Expansion of the UCI Hydrogen Refueling Station				
	11 / 07 / 2018	11 / 05 / 2021	\$ 400,000	
<input type="checkbox"/> Operational agreement (see CAM Manual for list) to be approved by Executive Director <input type="checkbox"/> ARFVTP agreements \$75K and under delegated to Executive Director.				
Proposed Business Meeting Date	11 / 07 / 2018	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion	
Business Meeting Presenter	Phil Cazel	Time Needed:	5 minutes	
Please select one list serve. Local Government				
<b>Agenda Item Subject and Description</b>				
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF THE IRVINE CAMPUS. Proposed resolution approving Agreement 600-18-002 for a \$400,000 contract with The Regents of the University of California, on behalf of the Irvine campus to expand the capacity of the University of California, Irvine hydrogen refueling station at 19172 Jamboree Road, Irvine, California. (ARFVTP funding) Contact: Phil Cazel. (Staff presentation: 5 minutes)				

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**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)):

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

Cal. Code Regs., tit. 14, sections 15301 "Existing Facilities;"

section number:

15303 "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:

The project is to increase the daily capacity of an existing hydrogen refueling station by adding hydrogen storage, compression, and an additional dispenser with an estimated maximum footprint of 1,000 square feet and trenching up to 50 feet to an existing hydrogen refueling station on the campus of U.C. Irvine.

As to the equipment to be installed, the storage tanks will hold up to 800 kg of hydrogen. Each hydrogen dispenser will dispense at 350 bar and 700 bar. Control valves will be pneumatically operated. All control valves fail in the safe direction (closed) after loss of utility power or instrument gas supply. All system alarms and shutdowns are displayed on the control panel face. Critical alarms are hard-wired in addition to being connected through the Programmable Logic Controller. This adds an extra layer of safety to the system.

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 an existing hydrogen refueling station that covers an area which is less than 1,000 square feet, with an excavation area of no more than 1,000 square feet. This square footage is far less than that specified in one example provided in the Regulations (i.e., 14 C.C.R. § 15301(e)) of a minor addition to existing structures. Because the proposed site is an existing hydrogen refueling station; the proposed addition of hydrogen storage and a second dispenser to the refueling facility 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. For these reasons, the project will not have a significant effect on the environment and falls within section 15301.

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 one hydrogen storage tank of up to 800 kg capacity, and compression and dispensing equipment, which will be under 1,000 square feet. Therefore, the proposed project will not have a significant effect on the environment and falls within section 15303.

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 this project, there will be up to 50 feet of trenching 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 will not have a significant effect on the environment and falls within section 15304.

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

Check all that apply

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

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

Legal Company Name:	Budget	SB	MB	DVBE
TBD	\$ 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	\$ 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	\$ 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legal Company Name:

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
Funding Source	2017/18	601.118JH	\$400,000
Funding Source			\$
Funding Source			\$
Funding Source			\$
Funding Source			\$
R&D Program Area:	Select Program Area		\$400,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:	Paul Lekutai	Name:	Scott Samuelson
Address:	UCI Office of Research 141 Innovation Drive, Suite 250	Address:	Advanced Power and Energy Program 221 Engineering Laboratory Facility
City, State, Zip:	Irvine, CA, 92697	City, State, Zip:	Irvine, CA, 92697
Phone:	949-824-4781	Fax:	949- -
E-Mail:	plekutai@uci.edu	E-Mail:	gss@uci.edu

☐ Solicitation Select Type Solicitation #: - - # of Bids: Low Bid? ☐ No ☐ Yes  
☐ Non Competitive Bid (Attach CEC 96)  
☒ Exempt Interagency

☐ 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)

If yes, check appropriate box: ☒ No ☐ Yes  
☐ SB ☐ MB ☐ DVBE

- ☒ 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:**

The Regents of the University of California (Irvine Campus) will use a competitive bid process to seek subcontractors to perform the work.

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**P) Payment Method**

- ☒ A. Reimbursement in arrears based on:
- ☒ Itemized Monthly      ☐ Itemized Quarterly      ☐ Flat Rate      ☐ One-time
- ☐ B. Advanced Payment
- ☐ C. Other, explain:

1. Is Agreement subject to retention? ☒ No ☐ Yes
- If Yes, Will retention be released prior to Agreement termination? ☐ No ☐ Yes

No rates are included under this agreement.

1. ☒ Exempt (Interagency/Other Government Entity)
2. ☐ Meets DVBE Requirements      DVBE Amount:\$ 0      DVBE %: \_\_\_\_\_
- ☐ Contractor is Certified DVBE
- ☐ 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)

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 a year? If yes, why? ☐ No ☒ Yes
- One year of data collection will be required after the station is completed.

- |   |   |  |
|---|---|--|
| 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. CEC 96, NCB Request                              | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached            |
| 4. CEC 95, DVBE Exemption Request                   | <input type="checkbox"/> N/A            | <input checked="" 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"/> Attached |

\_\_\_\_\_  
Agreement Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Office Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Deputy Director

\_\_\_\_\_  
Date

## Exhibit A – Scope of Work

### TASK LIST

Task #	Task Name
1	Agreement Management
2	Engineering, Procurement, and Site Installation
3	Commissioning and Start-up
4	Safety Planning and Implementation
5	Data Collection and Analysis
6	Report of Renewable Hydrogen Dispensed

### ACRONYMS/GLOSSARY

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

Acronym	Definition
CCM	Commission Contract Manager
CEQA	California Environmental Quality Act
FCEV	Fuel Cell Electric Vehicle
GFO	Grant Funding Opportunity
GO-Biz	Governor's Office of Business and Economic Development
LCFS	Low Carbon Fuel Standard
MSRC	Mobile Source Air Pollution Reduction Review Committee
NREL	National Renewable Energy Laboratory
SCAQMD	South Coast Air Quality Management District
UCI	University of California, Irvine

### BACKGROUND/PROBLEM STATEMENT

This network of hydrogen refueling stations and fuel cell electric vehicles (FCEV) will support the carbon reduction and air quality improvement goals of the State of California and Governor Brown's January 26, 2018 Executive Order B-48-18 calling for the construction and installation of 200 hydrogen refueling stations in California by 2025 to support the new target of 5 million ZEVs in California by 2030, of which, hydrogen FCEVs are expected to play a critical role. This growing hydrogen station network will also support the commercial launch and future deployment of FCEVs in California. Hydrogen fueling will also contribute to the mix of alternative fuels needed to implement the Low Carbon Fuel Standard (LCFS), which is designed to reduce the carbon intensity of transportation fuels by 10 percent by 2020.

Since the University of California, Irvine (UCI) hydrogen station became open retail in November 2015, it has experienced increased usage by light-duty FCEV drivers and the hydrogen powered bus used on campus. During busy times of the day, up to 4-5 light-duty FCEVs wait in line to refuel, especially when nearby hydrogen refueling stations are temporarily off-line due to maintenance.

On September 20, 2018, the Mobile Source Air Pollution Reduction Review Committee (MSRC) approved \$1 million in funding for the UCI hydrogen station expansion. A recommendation to award \$1 million from MSRC and up to \$400,000 in separate funding from the South Coast Air Quality Management District (SCAQMD) is expected to be presented at the November 2, 2018 SCAQMD Governing Board Meeting for final approval.

## **GOALS AND OBJECTIVES OF THE AGREEMENT**

The purpose of this agreement is to provide \$400,000 to the Regents of the University of California - Irvine Campus to augment the \$1,000,000 received from the MSRC and \$400,000 received from the SCAQMD to expand the capacity of the UCI hydrogen refueling station at 19172 Jamboree Road, Irvine, CA.

The project will increase the station's daily hydrogen dispensing capacity from 180 kg/day of gaseous hydrogen to 800 kg/day of liquid hydrogen and add a second hydrogen dispenser to the station allowing simultaneous refueling of 2 FCEVs.

## **FORMAT/REPORTING REQUIREMENTS**

### **Deliverables/Reports**

When creating reports, the Contractor shall use and follow, unless otherwise instructed in writing by the Commission Contract Manager (CCM), the latest version of the Consultant Reports Style Manual published on the Energy Commission's web site:

[http://www.energy.ca.gov/contracts/consultant\\_reports/index.html](http://www.energy.ca.gov/contracts/consultant_reports/index.html)

Each final deliverable shall be delivered as one original, reproducible, 8 ½" by 11", camera-ready master in black ink. Illustrations and graphs shall be sized to fit an 8 ½" by 11" page and readable if printed in black and white.

### **Electronic File Format**

The Contractor shall deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the CCM) of the full text in a compatible version of Microsoft Word (.doc).

The following describes the accepted formats of electronic data and documents provided to the Energy Commission as contract deliverables and establishes the computer platforms, operating systems and software versions that will be required to review and approve all software deliverables.

- Data sets shall be in Microsoft (MS) Access or MS Excel file format.
- PC-based text documents shall be in MS Word file format.
- Documents intended for public distribution shall be in PDF file format, with the native file format provided as well.
- Project management documents shall be in MS Project file format.

## **TASK 1- AGREEMENT MANAGEMENT**

### **Task 1.1 Kick-off Meeting**

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement.

**The Contractor shall:**

- Attend a “kick-off” meeting with the CCM, the Contracts Officer, and a representative of the Accounting Office. The meeting will be held via Web-Ex or teleconference. The Contractor shall include their Project Manager, Contracts Administrator, Accounting Officer, and others designated by the CCM in this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting.
- If necessary, prepare an updated Schedule of Deliverables based on the decisions made in the kick-off meeting.

**The CCM shall:**

- Arrange the meeting including scheduling the date and time.
- Provide an agenda to all potential meeting participants prior to the kick-off meeting.

**Deliverables:**

- Updated Schedule of Deliverables
- Kick-Off Meeting Agenda (CEC)

**Task 1.2 Invoices****The Contractor shall:**

- Prepare invoices for eligible reimbursable expenses incurred performing work under this Agreement in compliance with the Exhibit C of the Terms and Conditions of the Agreement. Invoices shall be submitted with the same frequency as progress reports (task 1.4). Invoices must be submitted to the Energy Commission’s Accounting Office.

**Deliverables:**

- Invoices

**Task 1.3 Manage Subcontractors**

The goal of this task is to ensure quality products, to enforce subcontractor Agreement provisions, and in the event of failure of the subcontractor to satisfactorily perform services, recommend solution to resolve the problem.

**The Contractor shall:**

- Provide a copy of the request for proposal released by UCI.
- Provide a list of bidders.
- Manage and coordinate subcontractor activities. The Contractor is responsible for the quality of all subcontractor work and the Energy Commission will assign all work to the Contractor. If the Contractor decides to add new subcontractors, they shall 1) comply with the Terms and Conditions of the Agreement, and 2) notify the CCM who will follow the Energy Commission’s process for adding or replacing subcontractors.

**Deliverables:**

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

**Task 1.4 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.

**The Contractor shall:**

- Prepare progress reports which summarize 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 within 15 calendar days after the end of the reporting period. The CCM will provide the format for the progress reports.

**Deliverables:**

- Monthly Progress Reports

**Task 1.5 Final Report**

The goal of this task is to prepare a comprehensive written Final Report that describes the original purpose, approach, results and conclusions of the work completed under this Agreement. The Final Report shall be prepared in language easily understood by the public or layperson with a limited technical background.

The Final Report must be completed before the termination date of the Agreement in accordance with the Schedule of Deliverables.

The Final Report shall be a public document. If the Contractor has obtained confidential status from the Energy Commission and will be preparing both a public and a confidential version of the Final Report, the Contractor shall perform the following subtasks for both the public and confidential versions of the Final Report.

**Task 1.5.1 Final Report Outline**

**The Contractor shall:**

- Prepare and submit a draft outline of the Final Report for review and approval. The CCM will provide written comments to the Contractor on the draft outline. The Contractor shall review the comments and discuss any issues with the recommended changes with the CCM.
- Prepare and submit the final outline of the Final Report, incorporating CCM comments.

**Deliverables:**

- Draft Outline of the Final Report
- Final Outline of the Final Report

**Task 1.5.2 Final Report**

**The Contractor shall:**

- Prepare the draft Final Report for this Agreement in accordance with the approved outline.
- Submit the draft Final Report for review and comment. The CCM will provide written comments to the Contractor. The Contractor shall review the comments and discuss any issues with the recommended changes with the CCM.
- Prepare and submit the Final Report, incorporating CCM comments.

**Deliverables:**

- Draft Final Report
- Final Report

**Task 1.6 Final Meeting**

The goal of this task is to discuss closeout of this Agreement and review the project.

**The Contractor shall:**

- Meet with Energy Commission staff prior to the term end date of this Agreement. The meeting may be held via Web-Ex or teleconference. This meeting will be attended by the

Contractor Project Manager and the CCM. The CCM will determine any additional appropriate meeting participants. The administrative and technical aspects of Agreement closeout will be discussed at the meeting.

- Present findings, conclusions, and recommended next steps (if any) for the Agreement, based on the information included in the Final Report.
- Prepare a written document of meeting agreements and unresolved activities.
- Prepare a schedule for completing the closeout activities for this Agreement, based on determinations made within the meeting.

**Deliverables:**

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

## **TECHNICAL TASKS**

### **TASK 2 ENGINEERING, PROCUREMENT, AND SITE INSTALLATION**

The goal of this task is to finalize the engineering design, procure equipment, complete installation, and submit permits required to operate the station to the CCM, for the expansion of the hydrogen refueling station located at:

***19172 Jamboree Road, Irvine, CA 92616***

The completed station shall meet the requirements for an open retail station as defined by the Governor's Office of Business and Economic Development (GO-Biz) and shall remain open for retail sales for a minimum of 5 years after becoming open retail.

**The Contractor shall:**

- Design the hydrogen refueling equipment with consideration of site-specific, equipment-specific, and operational conditions.
- Prepare and submit to the CCM an Equipment List for the hydrogen refueling station, including cost estimates for all components consistent with Exhibit B, Budget.
- Complete all other work including site preparation necessary to begin site construction.
- Build the station.
- Commission the station.
- Make the station open retail.
- Complete all construction and installation.
- Prepare and submit written notification that construction and installation is complete, which includes photographs of the equipment.
- Ensure that the station's hydrogen refueling dispensers meet or exceed the Minimum Technical Requirements as specified in GFO-15-605.

**Deliverables:**

- Equipment List.
- Evidence of second dispenser.
- Evidence of two fueling hoses.
- Evidence of two simultaneous fueling positions
- Evidence of two nozzles.
- Evidence of lighting to insure safe operation.
- Evidence of signage for station operation and attribution to California Energy Commission funding.
- Evidence of pathfinder signs.
- Evidence of freeway signage.

- Evidence of point of sale system that can read credit cards and debit cards with embedded chips.
- Evidence of emergency stop cover(s).
- Letter stating whether or not permits are needed (fire, building, and operational).
- Copies of permits including CEQA.
- Evidence of supply agreement with fuel supplier.
- Evidence of a fuel quality testing report as specified in California Code of Regulation (CCR) Title 4, Division 9, Chapter 6, Article 8, Sections 4180 and 4181 which adopts the Society of Automotive Engineers (SAE) International J2719: 2015 “Hydrogen Fuel Quality for Fuel Cell Vehicles.”
- Site Preparation Report.
- Letter of commitment to operate and maintain the station.
- Written Notification that construction and installation is complete.
- Photographs of installed equipment.
- Written and signed self-declaration of compliance (on company letterhead) with the Minimum Technical Requirements specified in GFO-15-605.

### **TASK 3 COMMISSIONING AND START OF OPEN RETAIL OPERATION**

The goals of this task are to test and commission the hydrogen refueling station to become open retail as defined by the Governor’s Office of Business and Economic Development (GO-Biz).

#### **The Contractor shall:**

- Perform engineering readiness review of station equipment and safety systems.
- Complete commissioning and start-up of open retail operation of the hydrogen refueling station using the U.S. Department of Energy hydrogen station equipment performance device (HyStEP), *or a functionally equivalent hydrogen station test apparatus*, or OEM best practices.
- Prepare Station Acceptance Testing Report which will include:
  - Documentation of the station readiness review.
  - Station commissioning test results.
  - Recommended additions to the safety and maintenance plans.
  - Station photographs showing evidence of filling one fuel cell electric vehicle with hydrogen, the vehicle identification number (VIN) of the vehicle, and the system components installed at the station (power source, compressor, storage tubes, dispenser, hoses, nozzles, and point of sale).
- Notify the CCM when the station becomes open retail as defined by the Governor’s Office of Business and Economic Development (GO-Biz).

#### **Deliverables:**

- Station Acceptance Testing Report for the station.
- Written notification that the station has become open retail as defined by the Governor’s Office of Business and Economic Development (GO-Biz), either by corporate email or on company letterhead.

### **TASK 4 SAFETY PLANNING AND IMPLEMENTATION**

The goal of this task is to develop a Hydrogen Safety Plan in accordance with the US DOE’s Hydrogen Safety Panel’s *Safety Planning for Hydrogen and Fuel Cell Projects*, dated March 2016, and available at:

[https://h2tools.org/sites/default/files/Safety\\_Planning\\_for\\_Hydrogen\\_and\\_Fuel\\_Cell\\_Projects-March\\_2016.pdf](https://h2tools.org/sites/default/files/Safety_Planning_for_Hydrogen_and_Fuel_Cell_Projects-March_2016.pdf). Submit the Hydrogen Safety Plan for review by the Hydrogen Safety Panel,

address the Hydrogen Safety Panel comments on the Hydrogen Safety Plan, and implement the plan with the station operator, maintenance contractors, and first responders.

**The Contractor shall:**

- Develop a Hydrogen Safety Plan and a Safety Training Plan and submit copies to the Hydrogen Safety Panel and the CCM.
- Review and address comments provided by the Hydrogen Safety Panel on the station's Hydrogen Safety Plan and Safety Training Plan.
- Update the station's Safety Training Plan based on comments provided by the Hydrogen Safety Panel.
- Update the station's Hydrogen Safety Plan based on comments provided by the Hydrogen Safety Panel.
- Implement the plan with the station operator, maintenance contractors and first responders.

**Deliverables:**

- Hydrogen Safety Plan.
- Safety Training Plan.
- Written report provided to the CCM that reviews and addresses the Hydrogen Safety Panel comments on company letterhead.
- Updated Safety Training Plan.
- Updated Hydrogen Safety Plan.
- Written notification provided to the CCM that the Safety Plan has been implemented with the station operator, maintenance contractors and first responders.

**TASK 5 DATA COLLECTION AND ANALYSIS**

The goal of this task is to collect operational data from the project and the hydrogen refueling station, to analyze that data for economic and environmental impacts, and to include the data and analysis in the Final Report.

**The Contractor shall:**

- Develop a plan for data collection according to the National Renewable Energy Laboratory (NREL) Data Collection Tool (Exhibit F).
- Collect 12 months of station throughput, usage, and operations data from the project including, but not limited to:
  - Maximum capacity of the new refueling 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. Provide data on potential job creation, economic development, and increased state revenue as a result of expected future expansion.
- Describe any energy efficiency measures used in the facility that may exceed standards in CCR, Title 24, Part 6 and their impact on energy savings and cost to operate the station.
- Provide a quantified estimate (actual and estimated) of the project's carbon intensity values for life-cycle greenhouse gas emissions.
- Collect data, information, and analysis described above and include in the Final Report.

- Complete the NREL Data Collection Tool (Exhibit F) for each quarter and submit to the CCM.

**Deliverables:**

- Completed quarterly NREL Data Collection Tool (Exhibit F).
- Data collection information and analysis to be included in the Final Report

**TASK 6 SEMI-ANNUAL REPORTS OF RENEWABLE HYDROGEN DISPENSED**

The goal of this task is to report the renewable hydrogen dispensed at the hydrogen refueling station every six months, starting six months after the operational date of the hydrogen refueling station until the Final Report has been accepted by the CCM.

**The Contractor shall:**

- Ensure that the hydrogen refueling station dispenses a minimum renewable hydrogen content of at least 33% renewable hydrogen (on a per kilogram basis).
- Complete and submit Semi-Annual reports of Renewable Hydrogen Dispensed (Exhibit E) once the hydrogen refueling station becomes operational.
- Identify the current and planned use and source of renewable energy at the facility and the source of the alternative fuel.

**Product:**

- Semi-annual reports of Renewable Hydrogen Dispensed (Exhibit E).

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF  
OF THE IRVINE CAMPUS

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

**RESOLVED**, that the Energy Commission approves Agreement 600-18-002 for a  
\$400,000 contract with The Regents of the University of California, on behalf of the Irvine  
campus to expand the capacity of the University of California, Irvine hydrogen refueling station  
at 19172 Jamboree Road, Irvine, California; 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 November 7, 2018.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

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Cody Goldthrite,  
Secretariat