

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement ARV-17-015 (To be completed by CGL Office)

600 Fuels and Transportation Division	Jane Berner	6	916-651-9077
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FirstElement Fuel, Inc.	46-4260718
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Redwood City Hydrogen Station

1 / 17 / 2018	12 / 30 / 2021	\$ 1,980,285
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☐ ARFVTP agreements \$75K and under delegated to Executive Director.

Proposed Business Meeting Date	01 / 17 / 2018	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
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Business Meeting Presenter	Time Needed: 5 minutes
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Please select one list serve. Altfuels (AB118- ARFVTP)

Agenda Item Subject and Description

Proposed resolution approving Agreement ARV-17-015 with FirstElement Fuel, Inc. for a \$1,980,285 grant to develop a hydrogen refueling station at 503 Whipple Avenue, Redwood City, CA 94063. This station will increase the reliability of the hydrogen refueling network in the San Mateo County area and the surrounding communities.

GRANT REQUEST FORM (GRF)**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 develop a hydrogen refueling station by adding hydrogen storage, compression and dispensing equipment with an estimated maximum footprint of 1,000 square feet and trenching up to 50 feet to an existing retail gasoline station.

As to the equipment to be installed, the storage tanks will hold up to 600 kg of hydrogen. The 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 gasoline 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. The proposed addition of a hydrogen refueling facility will not significantly expand the use beyond that already existing at the gas station, and the square footage of equipment installation is relatively small. 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 600 kg capacity, and compression and dispensing equipment, at each site, which will be under 1,000 square feet. Therefore, the proposed project falls 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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CALIFORNIA ENERGY COMMISSION

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

Legal Company Name:	Budget
Linde LLC	\$ 1,645,380
Linde, LLC	\$ 40,000
Overland Contracting, Inc.	\$ 294,905
I&D Consulting	\$ 0

Legal Company Name:

Linde, LLC

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTP			\$1,980,285
Funding Source			\$
Funding Source			\$
Funding Source			\$
Funding Source			\$
R&D Program Area:	Select Program Area		\$1,980,285
Explanation for "Other" selection			
Reimbursement Contract #:	Federal Agreement #:		

Name:	Patti Kohler	Name:	Tim Brown
Address:	5151 California Avenue, Suite 220	Address:	5151 California Avenue, Suite 220
City, State, Zip:	Irvine, CA 92617	City, State, Zip:	Irvine, CA 92617
Phone:	949-228-5769	Fax:	- -
E-Mail:	patti.kohler@firstelementfuel.com	E-Mail:	tim.brown@firstelementfuel.com

☒ Competitive Solicitation☐ First Come First Served Solicitation

Solicitation #: GFO-15-605

1. Exhibit A, Scope of Work	<input checked="" type="checkbox"/> Attached
2. Exhibit B, Budget Detail	<input checked="" type="checkbox"/> Attached
3. CEC 105, Questionnaire for Identifying Conflicts	<input checked="" type="checkbox"/> Attached
4. Recipient Resolution	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Attached
5. CEQA Documentation	<input 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
2		Completion of Critical Milestones
3	X	Engineering, Procurement, and Site Installation
4	X	Commissioning and Start-up
5		Safety Planning and Implementation
6		Data Collection and Analysis
7		Report of Renewable Hydrogen Dispensed

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Tim Brown, Patti Kohler		
2	Tim Brown, Shane Stephens, Ghassan Sleiman		
3	Tim Brown, Shane Stephens, Ghassan Sleiman, John Rapp	Overland Contracting, Inc., I&D Consulting, Linde	
4	Tim Brown, Shane Stephens, Ghassan Sleiman		Linde
5	Tim Brown, Shane Stephens, Ghassan Sleiman		
6	Tim Brown, Shane Stephens, Ghassan Sleiman		
7	Tim Brown, Shane Stephens, Ghassan Sleiman		

GLOSSARY

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

Term/Acronym	Definition
AB	Assembly Bill
ARFVTP	Alternative and Renewable Fuel and Vehicle Technology Program
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CCR	California Code of Regulations
CDFA/DMS	California Department of Food and Agriculture / Division of Measurement Standards
CPR	Critical Project Review
CSA	Canadian Standards Association

Term/Acronym	Definition
EMV	Europay, Mastercard, and Visa
Energy Commission	California Energy Commission
FCEV	Fuel Cell Electric Vehicle
FTD	Fuels and Transportation Division
GFO	Grant Funding Opportunity
HSSE	Health, Safety, Security and Environment
HyStEP	Hydrogen Station Equipment Performance
ISO	International Standards Organization
NIST	National Institute of Standards and Technology
NREL	National Renewable Energy Laboratory
OEM	Original Equipment Manufacturer
POS	Point of Sale
Recipient	FirstElement Fuel, Inc.
SAE	Society of Automotive Engineers
SOSS	Station Operational Status System

BACKGROUND

Assembly Bill (AB) 118 (Núñez, 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, clean air, and alternative energy policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024. The ARFVTP 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.

The Energy Commission issued solicitation Grant Funding Opportunity (GFO)-15-605, Light Duty Vehicle Hydrogen Refueling Infrastructure, to provide grant funds to expand the network of publicly accessible hydrogen refueling stations that serve California's light duty fuel cell electric vehicles (FCEVs). To be eligible for funding under GFO-15-

605, the projects must also be consistent with the Energy Commission's ARFVTP Investment Plan updated annually.

In response to GFO-15-605, FirstElement Fuel, Inc. (Recipient) submitted application number 9 for a number of stations, including one to be located at 503 Whipple Avenue, Redwood City, CA 94063, which was proposed for funding in the Energy Commission's Revised Notice of Proposed Awards on November 8, 2017. The Recipient's application, the Revised Notice of Proposed Awards for GFO-15-605, and GFO-15-605 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 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:

Hydrogen distribution and dispensing infrastructure is not readily available to meet projected commercial targets for the deployment of FCEVs. As FCEVs are deployed in greater quantities, a network of refueling stations is needed to provide coverage which takes advantage of the range of the vehicle, and provides a means to transport, store, and dispense hydrogen. This project will help address scientific and technical barriers to the build out of hydrogen refueling infrastructure, including addressing the limited availability of hydrogen refueling infrastructure performance data by delivering station performance data for larger capacity stations, namely those which can provide 310 kg in 12 hours.

Goals of the Agreement:

The goal of this Agreement is to build out hydrogen refueling infrastructure to support the roll out of FCEVs.

Objective of the Agreement:

The objective of this agreement is to provide a hydrogen refueling station at 503 Whipple Avenue, Redwood City, CA 94063 in support of Core Market Areas identified by the Energy Commission in GFO-15-605 Section IV.

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 Energy Commission Accounting Office. The Recipient shall bring their Project Manager, Agreement Administrator, Accounting Officer, and any others determined necessary by the Recipient or specifically requested by the CAM to this meeting.
- 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 and copies of any permits received thus far.

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, the Recipient, and may include the CAO, the Fuels and Transportation Division (FTD) program 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 CAO, 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 CAO 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 Monthly Progress Reports will summarize activities performed during the reporting period, identify activities planned for the next reporting period, identify issues that may affect performance and expenditures, and 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.
- A Monthly Progress Report shall contain updates on Critical Milestones described in Task 2.
- 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 this task is to produce a Final Report to assess the project's success in achieving the Agreement's goals and objectives and providing energy-related and other benefits to California and to provide a Final Report.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, and results; 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 following the ARFVTP Final Report Template (http://www.energy.ca.gov/contracts/consultant_reports/) 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 Commission Agreement Manager at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the Energy Commission 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 Energy Commission awarding this Agreement, then provide in the letter a list of the match funds that identifies the:
 - Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
 - Amount of each in-kind contribution, a description, documented market or book value, and its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact

name, address and telephone number, and the address where the property is located.

- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the Commission Agreement Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Agreement Manager 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 Commission Agreement Manager 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 Commission Agreement Manager.
 - As permits are obtained, send a copy of each approved permit to the Commission Agreement Manager.
 - 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:

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

TECHNICAL TASKS

TASK 2 COMPLETION OF CRITICAL MILESTONES

The goal of this task is to secure, control, and otherwise prepare the selected site for station installation. Recipient must complete the Critical Milestones identified below by the dates specified in the Schedule of Products and Due Dates, Exhibit A-1, in order to receive payment from the Energy Commission under this Agreement. Failure to complete the Critical Milestones by the dates specified in the Schedule of Products and Due Dates may also be cause for termination of this agreement. See also Exhibit C-1 of this Agreement, Special Terms and Conditions.

- ***Critical Milestone 1:*** The Recipient must have held an in-person pre-application meeting, for permits to build and operate each proposed hydrogen refueling station, with the authority that has jurisdiction over the project and entitlement process. The meeting should include but not be limited to discussion of zoning requirements and aesthetics of the proposed refueling station.

The Recipient must provide to the Energy Commission proof of having met this Critical Milestone in order to receive reimbursement for work performed under this Agreement, by submitting notes from a pre-application meeting with a date, time, location, and list of meeting participants to the CAM on or before the date specified in Exhibit A-1 to this Agreement.

Note: Energy Commission staff will determine whether the documentation submitted by the Recipient is sufficient to show that this Critical Milestone has been met.

- ***Critical Milestone 2:*** The Recipient must have control and possession of the site at which the hydrogen refueling station is to be constructed. The control and possession must be for the purpose of installing and operating a hydrogen refueling station. The Recipient must provide to the Energy Commission proof of

future control and possession for a minimum of 5 years after becoming open retail.

The Recipient must provide to the Energy Commission proof of having met this Critical Milestone in order to receive reimbursement for work performed under this Agreement, by submitting adequate documentation of site control to the CAM on or before the date specified in Exhibit A-1 to this Agreement.

Note: Documentation of site control may include, but is not limited to, an executed lease for the land on which the station will be constructed. Energy Commission staff will determine whether the documentation submitted by the Recipient is sufficient to show that this Critical Milestone has been met.

The Recipient shall:

- Hold an in-person pre-application meeting, for permits to build and operate the hydrogen refueling station, with the authority that has jurisdiction over the project and entitlement process by the date specified in the Schedule of Products and Due Dates.
- Obtain control and possession of the site at which the hydrogen refueling station is to be constructed by the date specified in the Schedule of Products and Due Dates.

Products:

- Documentation of an in-person pre-application meeting with the authority that has jurisdiction over the project for permits to build and operate the hydrogen refueling station.
- Documentation of obtained site control.

TASK 3 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 (see also Task 1.7) to the CAM, for the development of a hydrogen refueling station located at:

503 Whipple Avenue, Redwood City, CA 94063

The designed system shall adhere to the technical specifications in the Recipient's funding application and the Minimum Technical Requirements contained in GFO-15-605.

The Recipient shall:

- Design the hydrogen refueling equipment with consideration of site-specific, equipment-specific, and operational conditions.
- Prepare and submit to the CAM 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.
-
- 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 and each hydrogen refueling dispenser meets or exceeds the Minimum Technical Requirements as specified in GFO-15-605, Section VI.

Products:

- Equipment List.
- Site Preparation Report
- 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, Section VI.

[A CPR will be held during this task]

TASK 4 STATION COMMISSIONING AND OPERATIONS START-UP

The goals of this task are to test and commission the hydrogen refueling station to become operational (as defined in GFO-15-605, Section II. F.) and become open retail (as defined in GFO-15-605, Section II. H), and meet the requirements of Section VI.

The Recipient shall:

- Perform engineering readiness review of station equipment and safety systems.
- Complete commissioning and start-up of the hydrogen refueling station using HyStEP or OEM best practices as described in the Minimum Technical Requirements.
- 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 (POS)).
- Notify the CAM when the station becomes operational (as defined in GFO-15-605, Section II. F.).
 - Notify the CAM that the station has become open retail (as defined in GFO-15-605, Section II. H.), no more than 180 days after becoming operational.

Products:

- Station Acceptance Testing Report for the station.
- Written notification of when the station becomes operational (as defined in GFO-15-605, Section II. F.) and meets the requirements of GFO-15-605 Section VI (with the exception of paragraphs G and H), either by corporate email or on company letterhead.
- Written notification that the station has become open retail (as defined in GFO-15-605, Section II. H.) and meets the requirements of GFO-15-605 Section VI, no more than 180 days after becoming operational, either by corporate email or on company letterhead.

[A CPR will be held at the conclusion of this task.]

TASK 5 SAFETY PLANNING AND IMPLEMENTATION

The goal of this task is to address the Hydrogen Safety Panel comments on the Hydrogen Safety Plan and to implement these plans with the station operators, maintenance contractors, and first responders.

The Recipient shall:

- Address comments provided by the Hydrogen Safety Panel on the station's Hydrogen Safety Plan that was submitted at the time of application for this station.
- Review and address the Hydrogen Safety Panel comments.
- Update the station's Safety Training Plan based on comments previously provided by the Hydrogen Safety Panel.
- Update the station's Hydrogen Safety Plan based on comments previously provided by the Hydrogen Safety Panel.

Products:

- Written report provided to the CAM that reviews and addresses the Hydrogen Safety Panel comments on company letterhead.
- Written report provided to the CAM that reviews and addresses the Hydrogen Safety Panel comments on company letterhead should the panel review the station design.
- Updated Safety Training Plan.
- Updated Hydrogen Safety Plan.

TASK 6 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 Recipient shall:

- Develop a plan for data collection according to the 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 Title 24 standards in Part 6 of the California Code Regulations (CCR) 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 CAM.

Products:

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

TASK 7 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 CAM.

The Recipient 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: FIRSTELEMENT FUEL, INC.

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 ARV-17-015 from GFO-15-605 with FirstElement Fuel, Inc. for a \$1,980,285 grant to develop a hydrogen refueling station at 503 Whipple Avenue, Redwood City, CA 94063. This station will increase the reliability of the hydrogen refueling network in the San Mateo County area and the surrounding communities; 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 January 17, 2018.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat