



STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

A) New Agreement # ARV-21-032 (to be completed by CGL office)

B) Division	Agreement Manager:
600 Fuels and Transportation Division	Jim McKinney

C) Recipient's Legal Name	Federal ID #
Sacramento Municipal Utility District	94-6001157

D) Title of Project
Sacramento Region Medium and Heavy Duty Zero Emission Vehicle Blueprint Planning Project

E) Term and Amount

Start Date	End Date	Amount
09 / 08 / 2021	03 / 31 / 2023	\$ 200,000

F) Business Meeting Information

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

Proposed Business Meeting Date 9 / 8 / 2021 ☐ Consent ☒ Discussion

Business Meeting Presenter Kate Reid Time Needed: 5 minutes

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

Agenda Item Subject and Description:

SACRAMENTO MUNICIPAL UTILITY DISTRICT. Proposed resolution approving Agreement ARV-21-032 with Sacramento Municipal Utility District (SMUD) for a \$200,000 grant to identify the medium- and heavy-duty (MD/HD) charging needs for electric trucks and buses within the SMUD Service Territory and identify specific charger locations to serve those needs, and adopting staff's determination that this action is exempt from CEQA. (Clean Transportation Program Funding.) Contact Jim McKinney (Staff Presentation: 5 minutes).

G) California Environmental Quality Act (CEQA) Compliance

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

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

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.

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

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

☐ Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section:

Cal. Code Regs, tit. 14, §15306, Information Collection, provides that projects which consist of basic data collection, research and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource are categorically exempt from the provisions of CEQA. This project



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consists of developing a planning document for possible, future deployment of zero emission vehicles and related infrastructure equipment. The project will not cause direct physical changes to the environment, and there will be no physical construction. This project involves data collection, technology assessment, public outreach, administrative coordination efforts, planning, and similar activities. Therefore, the proposed project will have no significant effect on the environment and is categorically exempt under section 15306.

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

Check all that apply

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

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

Legal Company Name:	Budget
Frontier Energy, Inc.	\$ 99,252
The Greater Sacramento Regional Clean Air Coalition, Inc.	\$ 30,000
dba Sacramento Clean Cities Coalition	\$ 0.00

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

Legal Company Name:
See attached document.

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
ARFVTP	FY 19/20	601.118L	\$200,000
Funding Source			\$
Funding Source			\$
Funding Source			\$
Funding Source			\$

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

Explanation for "Other" selection

Reimbursement Contract #:

Federal Agreement #:

K) Recipient's Contact Information**1. Recipient's Administrator/Officer**

Name: Bob Hollowell

Address: 6201 S Street M.S. B357



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City, State, Zip: Sacramento, CA
95817-1899

Phone: (916) 732-6451

E-Mail: bob.hollowell@smud.org

2. Recipient's Project Manager

Name: Eric Cahill

L) Selection Process Used

- ☒ Competitive Solicitation Solicitation #: GFO-20-601
☐ First Come First Served Solicitation Solicitation #: - -

M) The following items should be attached to this GRF

- | | | | |
|---|-------------------------------------|-----|--|
| 1. Exhibit A, Scope of Work | <input checked="" type="checkbox"/> | N/A | <input checked="" type="checkbox"/> Attached |
| 2. Exhibit B, Budget Detail | <input checked="" type="checkbox"/> | N/A | <input checked="" type="checkbox"/> Attached |
| 3. CEC 105, Questionnaire for Identifying Conflicts | <input checked="" type="checkbox"/> | N/A | <input checked="" type="checkbox"/> Attached |
| 4. Recipient Resolution | <input 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

CALIFORNIA ENERGY COMMISSION

Address: 6201 S Street M.S. B305

City, State, Zip: Sacramento, CA
95817-1899

Phone: (916) 732-6032

E-Mail: eric.cahill@smud.org

Exhibit A SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Vehicle Assessment and Infrastructure Analysis
3	X	Electrical Load and Grid Analysis
4		Community Outreach and Workforce Development
5		Project Fact Sheet
6		Blueprint

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Eric Cahill - SMUD		
2	Eric Cahill / Bill Boyce – SMUD Chris White – Frontier Energy, Inc. Tim Taylor – Greater Sacramento Regional Clean Air Coalition, Inc. (dba Sacramento Clean Cities Coalition)	Frontier Energy, Inc. Sacramento Clean Cities Coalition	City of Sacramento City of West Sacramento Sacramento Municipal Air Quality Management District (SMAQMD) California Mobility Center SACOG Sacramento County Sacramento Regional Transit District
3	David Brown, PE - SMUD	Frontier Energy, Inc.	
4	Mark Rawson – CMC/SMUD Jose Bodipo-Memba - SMUD	Sacramento Clean Cities Coalition	CMC SMAQMD City of Sacramento City of West Sacramento
5	Eric Cahill - SMUD	Frontier Energy, Inc.	

6	Eric Cahill / Bill Boyce - SMUD	Frontier Energy, Inc. Sacramento Clean Cities Coalition	SMAQMD CMC Sacramento County Sac RT City of Sacramento City of West Sacramento
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GLOSSARY

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

Term/ Acronym	Definition
CaFCP	California Fuel Cell Partnership
CalETC	California Electric Transportation Coalition
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CARB	California Air Resources Board
CBO	Community Based Organization
CEC	California Energy Commission
Clean Transportation Program	Formerly known as Alternative and Renewable Fuel and Vehicle Technology Program
CMC	California Mobility Center
CPR	Critical Project Review
CSAC	Community Stakeholder Advisory Committee
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EMFAC	CARB's Emission FACTor model, which estimates official emissions inventories of onroad mobile sources in California
EV	Electric Vehicle
EPA	U.S. Environmental Protection Agency
FSAS	Financial Stakeholder Advisory Subcommittee

FTD	Fuels and Transportation Division
GHG	Greenhouse Gas
HFCV	Hydrogen Fuel Cell (Electric) Vehicle
MD/HD	Medium-Duty and Heavy-Duty
NO_x	Oxides of Nitrogen
PEV	Plug-in Electric Vehicle (includes Battery and Plug-in Hybrid Electrics)
PM_{2.5}	Particulate Matter at the 2.5 micron or smaller level
Recipient	Sacramento Municipal Utility District
SACOG	Sacramento Area Council of Governments
SMAQMD	Sacramento Municipal Air Quality Management District
SMUD	Sacramento Municipal Utility District
Sac RT	Sacramento Regional Transit
TAC	Technical Advisory Committee from the Mayors' Commission on Climate Change
VGI	Vehicle-Grid Interface
ZE	Zero Emission
ZEV	Zero Emission Vehicle (includes all zero tailpipe emissions vehicles including all-electric EVs and HFCVs)

BACKGROUND

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program (formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program). The statute authorizes the California Energy Commission (CEC) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the Program through January 1, 2024, and specifies that the CEC 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 Clean Transportation Program has an annual budget of approximately \$100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.

- Improve the efficiency, performance, and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use.
- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

The CEC issued GFO-20-601 entitled "Blueprints for Medium- and Heavy-Duty Zero-Emission Vehicle Infrastructure" under the CEC's Clean Transportation Program. To be eligible for funding under GFO-20-601, projects must also be consistent with the CEC's current Clean Transportation Program Investment Plan, updated annually. In response to GFO-20-601, the Recipient submitted Proposal #33, which was proposed for funding in the CEC's Notice of Proposed Awards on April 8, 2021. GFO-20-601 is 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. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the terms of the Recipient's Application, the terms of this Agreement shall control.

Problem Statement:

Medium-duty and heavy-duty (MD/HD) vehicles represent a small share of California registered vehicle stock, accounting for about 1 million out of 31 million vehicles, or 3 percent; however, this small number of vehicles is responsible for about 23 percent of on-road GHG emissions in the state because of comparatively low fuel efficiency and high number of miles traveled per year. MD/HD vehicles additionally account for nearly 60 percent of NO_x and 52 percent of PM_{2.5} emissions from on-road transportation in California. For these reasons, MD/HD vehicles represent a significant opportunity to reduce GHG emissions and criteria emissions while focusing on a small number of impactful vehicles to do so.

Despite increasing availability of electric MD/HD vehicles, including delivery vans, shuttles and school buses, customers remain hesitant to convert their fleets despite growing regulatory pressures. A customer journey study conducted by SMUD earlier this year found most fleet customers are deterred by the lack of charging and hydrogen fueling infrastructure. They are also discouraged by the risks associated with dependency on infrastructure that may not arrive when needed or potentially at all. Interviews with large area fleets cited the need for a regional plan to develop an integrated approach involving local governments, utilities, air districts and other regional stakeholders to provide the vision, leadership, and direction to instill confidence that the needed infrastructure will arrive. A coordinated regional electrification blueprint with buy-in from key regional players is essential to signal the commitment needed to

overcome this 'chicken-and-egg' dilemma and convince more fleets to convert sooner than they otherwise would.

Goals of the Agreement:

The goal of this agreement is to develop a planning "blueprint" that will identify actions and milestones needed for implementation of medium- and heavy-duty (MD/HD) zero-emission vehicles (ZEVs) and the related electric charging and/or hydrogen refueling infrastructure. This blueprint will accelerate the deployment of MD/HD ZEVs and ZEV infrastructure with a holistic and futuristic view of transportation planning.

Objectives of the Agreement:

The objectives of this Agreement are to create a regional blueprint for Sacramento and West Sacramento that will identify actions and milestones needed for implementation of MD/HD zero-emission vehicles (ZEVs) and the electric charging and hydrogen refueling infrastructure needed to support them. The objectives of this project are to:

1. Evaluate MD/HD depot locations, travel patterns, and pass-through traffic moving through the region, and solicit input from fleets to inform the locating of charging and hydrogen fueling infrastructure, both at depots and on route.
2. Leverage inventory data and ongoing analysis from SMUD that forecasts MD/HD fleet growth and ZEV uptake through 2040 at the census tract and physical address / site level to develop a map that overlays current and anticipated locations for charging and hydrogen fueling stations with available grid capacity in Sacramento and West Sacramento.
3. Identify specific, cost-effective, and viable locations for ZEV infrastructure in terms of anticipated base-load fleet use, avoidance of grid constraints, and use of innovative technologies and approaches to mitigate deficient conditions. This includes recommending locations with conditions more favorable to the siting of hydrogen stations than the siting of charging stations.
4. Engage with community, industry, city and county agencies, energy, equity, economic and workforce development and financial institutions to create a framework for workforce development and long-term financial viability.

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 California Energy Commission (CEC) Accounting Office. The Recipient shall bring their Project Manager, Agreement Administrator, Accounting Officer, and any others determined necessary by the Recipient or specifically requested by the CAM to this meeting.
- 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

Commission Agreement Manager Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

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

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

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

The CAM shall:

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

The Recipient shall:

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

CAM Products:

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

Recipient Product:

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

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

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

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

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

- What to do with any equipment purchased with CEC funds (Options)
- CEC request for specific “generated” data (not already provided in Agreement 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.
- 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 CEC and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

The Recipient shall:

- Prepare an Outline of the Final Report.
- 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
- Draft Final Report
- Final Report

Task 1.6 Identify and Obtain Matching Funds

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

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

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the CAM at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the CEC awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter. If match funds were a part of the proposal that led to the CEC awarding this Agreement, then provide in the letter a list of the match funds that identifies the:
 - Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.

- Amount of each in-kind contribution, a description, documented market or book value, and its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the CAM if during the course of the Agreement additional match funds are received.
- Notify the CAM within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR meeting.

Products:

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

Task 1.7 Identify and Obtain Required Permits

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

Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. Although the CEC budget for this task will be zero dollars, the 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 CEC an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

The 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 VEHICLE ASSESSMENT AND INFRASTRUCTURE ANALYSIS

The goal of this task is to assess the MD/HD vehicle population in Sacramento and West Sacramento, both return-to-base fleets and long-distance goods movement, to identify preliminary sites for electric vehicle (EV) charging and hydrogen stations. Fleet and utility data will be used to plot preliminary electrical service needs and develop innovative strategies to reduce grid impacts.

The Recipient shall:

- Form and convene a Community Stakeholders Advisory Committee (CSAC) to include utility, air district, municipal, CBO, workplace, business, local permitting office, non-profit and financial institution representatives.
- Provide the list of CSAC members and meeting summary(ies) to the CAM.
- Compile an inventory of the largest fleet operators cataloging the size, mix and duty cycles of MD/HD vehicles by vehicle class and by census tract and/or physical site that domicile in Sacramento and West Sacramento.
- Provide census of the current MD/HD fleets in Sacramento and West Sacramento and maps of goods movement routes to the CAM.

- Conduct interviews with select customers to gain refined operational insights on fleet conversion opportunities.
- Leverage and update the SACOG Goods Movement Plan to identify corridors for goods movement that includes MD/HD vehicles traveling to and through the Sacramento region.
- Leverage Guidehouse MD/HD ZEV adoption analysis and 20-year forecast commissioned by SMUD to perform a first-cut electrical grid analysis at the census tract and/or site level for MD/HD ZEV adoption and associated EV charging and hydrogen station infrastructure needs.
- Develop a 20-year forecast for charging (kw) and hydrogen (kg).
- Provide the EV and HFCV adoption forecast and energy/fuel needs by census tract or physical site and by vehicle class and fuel type through 2040 to the CAM.
- Evaluate potential for local production of renewable hydrogen to meet expected demand.

Products:

- List of CSAC members and meeting summary(ies)
- Census of the current MD/HD fleets in Sacramento and West Sacramento and maps of goods movement routes
- EV and HFCV adoption forecast and energy/fuel needs by census tract or physical site and by vehicle class and fuel type through 2040

TASK 3 ELECTRICAL LOAD AND GRID ANALYSIS

The goals of this task are to 1) identify specific addresses for charging and hydrogen stations and 2) analyze the electrical loads needed for charging stations, hydrogen stations, and identified hydrogen production.

The Recipient shall:

- Conduct a preliminary analysis of existing site capacity for commercial fleets that are most likely to impact the grid for EV charging, hydrogen dispensing, and/or hydrogen production by 2035.
- Identify steps to ensure a safety plan is in place for hydrogen refueling infrastructure and that siting criteria will adhere to standard hydrogen safety compliance requirements and protocols. This may include, but is not limited to, coordination with the Pacific Northwest National Laboratory's or the Center for Hydrogen Safety's Hydrogen Safety Panel.
- Analyze options to reduce service loads and reduce costs, including charge management, load management, energy storage, and VGI.

- Conduct a preliminary analysis and assessment of needs to upgrade transmission substations and associated modifications.
- Analyze potential baseload users that may achieve long-term sustainability and grid integration benefits via upgrade avoidance or operational benefits (e.g., renewable integration and grid reliability). Technology options may include wireless charging, high-powered charging, overhead catenary systems, solar chargers, robotic chargers, mobile chargers/refuelers, curbside, streetlamp, and intersection chargers, or autonomous garages.
- Assess appropriate Vehicle-Grid Integration (VGI) standards and open standards-based network communications.
- Evaluate the ability to support emerging connectors and/or interfaces for heavy-duty vehicles, open standards-based network communications, the inclusion of appropriate VGI standards, and/or other methods for enhancing grid-reliability by providing data to utilities to predict charging behavior and associated impacts on the grid.
- Consider how the project integrates energy storage for the electricity grid or uses curtailed or dedicated renewable energy as a source for renewable hydrogen.
- Consider the use of interoperable MD/HD charging connectors and/or charging interfaces compatible with MD/HD vehicles sold by multiple original automotive equipment manufacturers for widespread use across California and North America.
- Consider other methods for enhancing grid-reliability by providing data to utilities to predict charging behavior and associated impacts on the grid.
- Based on analysis, draft recommendations for siting of electric charging stations, hydrogen stations, and hydrogen production with map(s) of recommended locations against available grid capacity in Sacramento and West Sacramento. Include maps of Recommended EV Charging, Hydrogen Stations Locations, including Hydrogen Production Overlaid with Existing and Planned Grid Capacity in the Sacramento and West Sacramento Areas. Provide a copy to the CAM.
- Identify analytical tools, software applications, and data needed to improve future MD/HD ZEV infrastructure planning activities.
- Conduct an Interim (mid-program) Review of progress to date.
- Prepare an Interim Review PowerPoint and provide a copy to the CAM.

Products:

- Draft Recommendations
- Interim Review PowerPoint

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

TASK 4 COMMUNITY OUTREACH AND WORKFORCE PLANNING

The goal of this task is to engage local permitting authorities, community-based organizations (CBOs) and residents to ensure they are educated and engaged with the planning process and understand the benefits of ZE MD/HD vehicles. A related goal is to engage with local community colleges and technical training pathways to strengthen workforce development strategies needed to implement the blueprint.

The Recipient shall:

- Convene a Financial Stakeholder Advisory Subcommittee (FSAS) from the Sacramento/West Sacramento Mayors' Commission on Climate Change to evaluate and recommend financing and funding mechanisms MD/HD ZEV infrastructure.
- Provide a list of FSAS members and a copy of agendas, attendee lists, and meeting summaries of FSAS to the CAM.
- Develop an outreach strategy tailored to local community, supported by education and outreach materials appropriate for potentially affected residents, in the languages needed for the community, to educate on the planning efforts and potential future impacts. Provide a copy of the strategy and materials to the CAM.
- Leverage the Sacramento PEV Collaborative's Disadvantaged Community Subcommittee for feedback on and input to the blueprint throughout the planning process.
- Provide a list of PEV Collaborative's Disadvantaged Community Subcommittee members to the CAM.
- Engage community colleges, CBOs and community leaders to develop workforce development strategies that will enable training, education, and readiness for the local community workforce to obtain the requisite knowledge, skills, and ability to develop, support, and maintain the MD/HD ZEV fleets.
- Leverage existing relationships and programs at the California Mobility Center and Los Rios Community College District to develop a Framework to prepare unemployed and underemployed people for living-wage jobs that MD/HD ZEVs will bring to the region.
- Provide a copy of the Jobs Assessment and Workforce Development Framework to the CAM.

- Engage municipal governments and permitting authorities to explore and resolve processes to standardize, streamline and expedite siting, permitting and other compliance requirements supporting EV and HFCV infrastructure installations, where feasible.
- Draft a report of existing and recommended jurisdictional processes impacting ZEV infrastructure development and provide a copy to the CAM.

Products:

- List of FSAS and Sacramento PEV Collaborative's Disadvantaged Community Subcommittee members
- Agendas, attendee lists, and meeting summaries of FSAS
- Outreach Strategy and supporting materials
- Jobs Assessment and Workforce Development Framework
- Report of existing and recommended jurisdictional processes impacting ZEV infrastructure development

TASK 5 PROJECT FACT SHEET

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

The Recipient shall:

- Prepare an Initial Project Fact Sheet at start of the project that describes the project and the expected benefits. Use the format provided by the CAM.
- Prepare a Final Project Fact Sheet at the project's conclusion that describes the project, the actual benefits resulting from the project, and lessons learned from implementing the project. Use the format provided by the CAM.
- Provide at least six high quality digital photographs (minimum resolution of 1300x500 pixels in landscape ratio) from the project.

Products:

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

TASK 6 BLUEPRINT

The goal of this task is to develop a plan that stakeholders in Sacramento and West Sacramento can use to implement ZEV infrastructure and that other regions and/or fleets can replicate. The plan will include recommended charging/refueling locations, identification of costs and financial mechanisms, processes, and procedures for streamlining implementation, developing a local workforce, and estimating GHG reduction potential and benefits to disadvantaged and low-income communities and underserved groups.

The Recipient shall:

- Based on the outcomes of the above tasks (Tasks 2 to Task 5), develop a cohesive plan with quantified goals and specific, achievable timelines for installation and deployment of MD/HD ZEV infrastructure, including the mix of electricity, hydrogen, and technology innovations to optimize grid capability.
- Estimate GHG emissions and criteria pollutant reduction potential and the extent to which this helps SMUD achieve its absolute zero energy goal by 2030.
- Summarize the types of jobs that will be created.
- Identify each task or area of responsibility required of the project partners and stakeholder groups to develop a replicable approach for other fleets transitioning to zero-emission
- Identify the benefits that would accrue to disadvantaged communities (DACs), low-income communities, priority populations, and/or tribal lands to the maximum extent possible.
- Address health and safety, access and education, financial benefits, economic development, and consumer protection.
- Identify each task or area of responsibility required of the project partners and stakeholder groups to develop a replicable approach for other fleets transitioning to zero-emission alternatives.
- Identify processes to standardize, streamline and expedite siting, permitting and other compliance requirements like safety protocols supporting EV and HFCV infrastructure installations, where feasible, as well as share lessons learned.
- Develop a resiliency plan for an emergency that may include flood, fire, prolonged power outage, or reduced hydrogen fuel supply.
- Complete a Draft Blueprint.
- Prepare a Final Blueprint.

Products:

- Draft Blueprint
- Final Blueprint

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD)

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

RESOLVED, that the CEC approves Agreement ARV-21-032 with SMUD for a \$200,000 grant to identify MD/HD electric charging and hydrogen refueling needs for ZEV trucks and buses within the SMUD service territory, and identify specific infrastructure locations to serve those needs; and

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

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on September 8, 2021.

AYE:

NAY:

ABSENT:

ABSTAIN:

Liza Lopez
Secretariat