



STATE OF CALIFORNIA

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

**A) New Agreement # ZVI-21-015 (to be completed by CGL office)**

<b>B) Division</b>	<b>Agreement Manager:</b>	<b>MS-</b>	<b>Phone</b>
600 Fuels and Transportation Division	Kate Reid	27	916-237-2536

<b>C) Recipient's Legal Name</b>	
SSA Pacific, Inc.	20-0429009

<b>D) Title of Project</b>
Agricultural Goods Movement Blueprint

**E) Term and Amount**

<b>Start Date</b>	<b>End Date</b>	<b>Amount</b>
02/16/2022	04/ 30/ 2023	\$ 200,000

**F) Business Meeting Information**

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

Proposed Business Meeting Date 02 / 16 / 2022 ☒ Consent ☐ Discussion

Business Meeting Presenter Kate Reid Time Needed: 0 minutes

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

**Agenda Item Subject and Description:**

SSA Pacific, Inc. Proposed resolution approving Agreement ZVI-21-015 with SSA Pacific, Inc. for a \$200,000 grant to develop a blueprint that will establish a replicable strategy to create a zero-emission vehicle (ZEV) on- and off-road logistics chain to support agricultural goods movement in California, and adopting staff's determination that this action is exempt from the California Environmental Quality Act (CEQA). (General Fund Funding) Contact: Kate Reid

**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: 14 CCR section 15306 – Information Collection

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

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



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exempt from the provisions of CEQA. This project 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
Build Momentum, d.b.a. Momentum	\$ 125,000.00
Arup US, Inc.	\$ 75,000.00

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

Legal Company Name:

**J) Budget Information**

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
General Fund	FY 21/22	601.129ZEV	\$200,000.00
Funding Source			\$
Funding Source			\$
Funding Source			\$
Funding Source			\$

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

Explanation for "Other" selection

Reimbursement Contract #:

Federal Agreement #:



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CALIFORNIA ENERGY COMMISSION

### K) Recipient's Contact Information

#### 1. Recipient's Administrator/Officer

Name: Joe Carrillo

Address: 2321 West Washington  
Street

City, State, Zip: Stockton, CA  
95203

Phone: (209) 420-5693

E-Mail:  
Joe.Carrillo@ssamarine.com

#### 2. Recipient's Project Manager

Name: Matt Hart

Address: 801 K Street, Floor 28

City, State, Zip: Sacramento, CA  
95816

Phone: (650) 796-6288

E-Mail: matt@buildmomentum.io

### 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"/>     | 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 checked="" type="checkbox"/> N/A | <input type="checkbox"/> Attached |

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

\_\_\_\_\_  
Date

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

\_\_\_\_\_  
Date

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

\_\_\_\_\_  
Date

**SSA Pacific, Inc. (ZVI-21-015)**  
**CEC-270 Attachment**  
**Subcontractors**

		CEC Reimbursable Amount	CEC Match Share Amount
<b>Subrecipient:</b>	<b>Build Momentum</b>	<b>\$ 125,000</b>	<b>\$ -</b>
Subrecipient:	Energy Mission Control Corporation	\$ 5,000	\$ -
Subrecipient:	Starcrest Consulting Group, LLC	\$ 20,000	\$ -
<b>Subrecipient:</b>	<b>Arup</b>	<b>\$ 75,000</b>	<b>\$ -</b>

## Exhibit A SCOPE OF WORK

### TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Community and Stakeholder Engagement
3		Flexible Adaptation Pathways
4	X	Innovative ZEV Approaches
5		Knowledge Transfer
6		Project Fact Sheet
7		Blueprint
8		Data Collection

### KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Joe Carrillo	Build Momentum, d.b.a. Momentum	
2	Joe Carrillo	Momentum	Association of Pacific Ports California State University Maritime Academy Wiggins Lift Co., Inc. Caltrans Benicia Port Terminal Company
3	Joe Carrillo Lauren Offenbecher	Arup US, Inc.	
4	Joe Carrillo	Momentum Energy Mission Control Corporation	Caltrans
5	Joe Carrillo	Momentum	Summers Consulting

<b>Task #</b>	<b>Key Personnel</b>	<b>Key Subcontractor(s)</b>	<b>Key Partner(s)</b>
6	Joe Carrillo	Momentum	
7	Joe Carrillo	Momentum	
8	Joe Carrillo	Momentum	

## **GLOSSARY**

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

<b>Term/ Acronym</b>	<b>Definition</b>
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CTP	Clean Transportation Program
CPR	Critical Project Review
DER	Distributed Energy Resource
FTD	Fuels and Transportation Division
LCFS	Low Carbon Fuel Standard
Recipient	SSA Pacific, Inc.
MD/HD	Medium- and Heavy-Duty
VGI	Vehicle-Grid Integration
ZEV	Zero-Emission Vehicle. This may include on- and off-road vehicles, equipment, and harbor craft.

## **BACKGROUND**

The Budget Act of 2021 (AB 128, Ting, Chapter 21, Statutes of 2021, as amended by Senate Bill (SB) 129, Skinner, Chapter 69, Statutes of 2021 and SB 170, Skinner, Chapter 240, Statutes of 2021) appropriated \$785,000,000 from the General Fund to support infrastructure deployments and manufacturing projects for zero-emission light-duty and medium- and heavy-duty vehicles.

On July 14, 2020, the CEC released Grant Funding Opportunity, entitled “Blueprints for Medium- and Heavy-Duty Zero-Emission Vehicle Infrastructure.” This competitive grant solicitation was to fund planning “blueprints” 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. In response to GFO-20-601, the Recipient submitted application #40 which was proposed for funding in the CEC's Notice of Proposed Awards on August 16, 2021. GFO-20-601 and the Recipient's application 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 CEC's Award, CEC'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:**

California's agricultural industry is one of the state's most important economic drivers, employing hundreds of thousands of people across the state, laying a foundation for the Central Valley's economy, and bringing in billions of dollars in revenue. This industry consists of a highly diverse and disaggregated set of industries, making education about ZEV and ZEV infrastructure options challenging. Moreover, the diversity of equipment supporting the safe, reliable flow of agricultural imports and exports has been slow to decarbonize despite having significant utility in other industrial applications. This Blueprint seeks to address the education and information gap by utilizing the Recipient's unique position as a central convenor of agricultural and industrial goods to showcase and demonstrate the capabilities and innovations around break bulk material handling.

### **Goals of the Agreement:**

The goal of this Agreement is to design and develop an implementable and replicable MD/HD ZEV Blueprint that will accelerate the adoption and deployment of MD/HD ZEV infrastructure across the diverse industrial operations at California's freight hubs and California's entire agricultural freight supply chain, from growers, to food processors, to distribution networks locally and internationally.

### **Objectives of the Agreement:**

The objectives of this Agreement are to:

- Engage a broad stakeholder network to develop a comprehensive, economic, and equitable approach to rapidly deploying MD/HD ZEV infrastructure.
- Advance California's ports to be cutting-edge technology demonstrators and innovators to harness the broad industry reach to accelerate wide-scale market adoption.

- Identify innovative approaches for the Recipient to offer technical solutions to improve ZEV adoption across the agricultural goods movement industry including the utilization of inland marine waterways to reduce congestion and support shorter round-trip haul distances to better suit ZEVs, the deployment of shared infrastructure to reduce range anxiety, and the use of Low Carbon Fuel Standard (LCFS) credits to catalyze adoption.

## **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.
- Provide a written statement of project activities that have occurred after the notice of proposed awards but prior to the execution of the agreement using match funds. If none, provide a statement that no work has been completed using match funds prior to the execution of the agreement. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.
- Discuss the following administrative and technical aspects of this Agreement:
  - Agreement Terms and Conditions
  - Critical Project Review (Task 1.2)
  - Match fund documentation (Task 1.7) No reimbursable work may be done until this documentation is in place.
  - Permit documentation (Task 1.8)
  - Subawards needed to carry out project (Task 1.9)
  - The CAM's expectations for accomplishing tasks described in the Scope of Work
  - An updated Schedule of Products and Due Dates



- Monthly Calls (Task 1.4)
- Quarterly Progress Reports (Task 1.5)
- Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Final Report (Task 1.6)

**Recipient Products:**

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits
- Written Statement of Match Share Activities

**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 Energy Commission funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

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

Meeting participants include the CAM and the Recipient and may include the CAO, the Fuels and Transportation Division (FTD) 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 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 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 Calls**

The goal of this task is to have calls at least monthly between CAM and Recipient to 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 verbally 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, to verify match funds are being proportionally spent concurrently or in advance of CEC funds or are being spent in accordance with an approved Match Funding Spending Plan, to form the basis for determining whether invoices are consistent with work performed, and to answer any other questions from the CAM. Monthly calls might not be held on those months when a quarterly progress report is submitted, or the CAM determines that a monthly call is unnecessary.

**The CAM shall:**

- Schedule monthly calls.
- Provide questions to the Recipient prior to the monthly call.

- Provide call summary notes to Recipient of items discussed during call.

**The Recipient shall:**

- Review the questions provided by CAM prior to the monthly call
- Provide verbal answers to the CAM during the call.

**Product:**

- Email to CAM concurring with call summary notes.

**Task 1.5 Quarterly Progress Reports**

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

**The Recipient shall:**

- Prepare a Quarterly 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. Progress reports are due to the CAM the 10<sup>th</sup> day of each January, April, July, and October. The Quarterly Progress Report template can be found on the ECAMS Resources webpage available at <https://www.energy.ca.gov/media/4691>.

**Product:**

- Quarterly Progress Reports

**Task 1.6 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 1.7 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 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 1.8 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 may 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 1.9 Obtain and Execute Subawards**

The goal of this task is to ensure quality products and to procure subrecipients 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.

### **The Recipient shall:**

- Manage and coordinate subrecipient activities.
- If requested by the CAM, submit a draft of each subaward required to conduct the work under this Agreement to the CAM for review.
- If requested by the CAM, submit a final copy of the executed subaward.
- If Recipient intends to add new subrecipients or change subrecipients, then the Recipient shall notify the CAM.

### **Products:**

- Letter describing the subawards needed, or stating that no subawards are required
- Draft subcontracts (if requested)
- Final subcontracts (if requested)

## **TECHNICAL TASKS**

### **TASK 2 COMMUNITY AND STAKEHOLDER ENGAGEMENT**

The goal of this task is to bring together industry participants, stakeholders, and advocates to foster productive and thoughtful dialogue around the deployment of shore power and alternative fueling infrastructure supporting the agricultural goods movement supply chain, including off-road material handling, on-road, on-water, and on-rail MD/HD ZEVs, in furtherance of local, regional, and state objectives.

### **The Recipient shall:**

- Prepare a List of Outreach Targets to ensure a diverse stakeholder audience.
- Prepare a Community and Stakeholder Engagement Plan to identify the purpose of its engagement with communities and stakeholders and the goals and intended outcomes of the outreach by stakeholder segment.
- Engage electric utilities to support grid delivery, reliability, and resiliency. Engagement will include:
  - Outreach to Pacific Gas and Electric, Port of Oakland, and Port of Stockton.
  - Discussions about existing or near-term programs managed by utilities to support the development of MD/HD ZEV infrastructure, including rebates and preferential tariffs.



- Identification of opportunities and challenges associated with MD/HD ZEV infrastructure deployments.
- Engage hydrogen providers to understand plans for hydrogen production and distribution. Engagement will include:
  - Outreach to Pacific Gas and Electric.
  - Discussions about existing or near-term programs managed by utilities to support the development of hydrogen-based MD/HD ZEV infrastructure for on- and off-road applications.
  - Outreach to major private-sector hydrogen producers, such as Linde, Air Liquide, and Praxair.
  - Outreach to major private-sector hydrogen production equipment manufacturers, such as Nel Hydrogen, Hydrogenics/Cummins, and ITM Power.
  - Identification of opportunities and challenges associated with hydrogen-based MD/HD ZEV infrastructure deployments.
- Engage local jurisdictions and planning organizations to ensure they are involved in the planning and permitting of the infrastructure. Engagement will include:
  - Outreach to the City of West Sacramento, City of Benicia, City of Oakland, and City of Stockton to assess the permitting process for the installation of ZEV charging and hydrogen refueling infrastructure and relevant distributed energy resource (DER) technologies.
  - Outreach to Yolo-Solano Air Quality Management District, Bay Area Air Quality Management District, Sacramento Metropolitan Air Quality Management District, and San Joaquin Valley Air Pollution Control District to determine whether any permits are required.
  - Document actions or steps already adopted by local, state, and federal jurisdictions and the impact of those actions or steps on the development of MD/HD ZEV infrastructure and the electrification of multimodal transportation.
- Engage regional workplaces, business owners and operators, regional community-based organizations (CBOs), community leaders, California Native American Tribes, and potentially affected local residents in the planning process and education on the benefits of ZEV transportation. Engagement will include:
  - Outreach to industry associations and businesses that export agricultural products to understand their perspectives and concerns about the transition to MD/HD ZEVs.

- Education about new and innovative technologies that solicit dialogue and conversation about the electrification of multimodal transportation and the future of sustainable freight.
- Work with community colleges, California State University Maritime Academy, 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.
- Develop an outreach approach 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.
- Engage internal Recipient divisions, terminal operators, and employees to foster dialogue and communication around new transportation paradigms that are cross cutting between internal stakeholder groups.
  - Leverage results and lessons learned from ongoing cargo handling equipment electrification projects across the Ports of Long Beach, Oakland, Stockton, and San Diego to inform discussions and decision-making processes.
- Engage financial institutions to ensure they are educated, involved, and committed to participate in the implementation of the MD/HD ZEV infrastructure blueprint. Engagement will include:
  - Outreach to clean energy infrastructure financiers with a history of supporting the development, installation, and operation of renewable energy technologies including DER technologies, microgrids, light-duty ZEV infrastructure, and renewable fuels projects, to identify potential sector partners that have experience underwriting these new technologies.
  - Discussions to understand new and innovative business models around energy-as-a-service, incentive and credit monetization, and third-party ZEV fueling operations.
- Prepare a Community and Stakeholder Engagement Report that includes:
  - Organizations, companies, and stakeholders that received outreach
  - Summary of the outcomes of such outreach (e.g. engaged in dialogue, declined to participate, did not respond)
  - Overview of topics discussed
  - Summary of the key findings aggregated by stakeholder segment

**Products:**

- List of Outreach Targets
- Community and Stakeholder Engagement Plan
- Community and Stakeholder Engagement Report

**TASK 3 FLEXIBLE ADAPTATION PATHWAYS**

The goal of this task is to leverage the experience of the project team to build upon stakeholder engagement and produce a series of navigable pathways for the Recipient to successfully implement ZEV infrastructure. The Flexible Adaptation Pathways (FAP) approach will enable the project team to account for select uncertainties associated with the implementation of ZEV infrastructure, such as technology advancement, manufacturing scalability, incentive funding, and industry adoption.

**The Recipient shall:**

- Undertake precedent background and literature review to collect relevant information on peer MD/HD ZEV transition planning and activities related to the type of facilities analogous to those run/operated by the Recipient.
- Prepare portfolio-wide Resilience Assessment for the ZEV fleet based on desktop study of applicable hazard profiles across the region, general operations information, and industry best-practice risk-mitigation strategies.
- Document the flexible adaptation pathway approach by drawing from defensible precedents for adaptation pathways. Known examples include Treasure Island redevelopment (San Francisco, California), Dutch delta program (Netherlands), and Thames estuary 2100 plan (London, UK). Relevant examples will be combined with current research on the topic of ZEV to establish a foundation and justification for applying this approach to the Recipient's operations and agricultural goods movement network.
- Establish a suite of adaptation actions that includes actions identified as part of the precedent research as well as through stakeholder engagement with SSA Pacific, ZEV specialists, and the project team. Potential adaptation actions will focus on, at a minimum, the type of fueling/charging infrastructure to be installed, the quantity of infrastructure units, and general locations of infrastructure.
  - Actions identified will emphasis 'real options' which are fitted with flexibility to adapt to future changes, rather than be fitted for a specific design scenario.
  - Descriptions of 'real options' will incorporate how they can apply to the ZEV conversation within Recipient sites and the broader agricultural goods movement context.

- Actions are intended to express a final bookend of measures taken in whole.
- Establish phases with set time-horizons to use in the evaluation of actions and trigger points that could affect infrastructure adaptation.
  - Phases will be driven by development plans, technology adoption rates, and logical windows for considering infrastructure upgrades.
  - For example, Phase A 2020-2030, Phase B 2030-2050, Phase C 2050+ could be proposed and then matched with specific ZEV technology adoption projections for those periods. Note that the ultimate selected phases may change from the example in this bullet based on data collection and stakeholder engagement.
- Assemble flexible adaptation pathways using adaptation actions and specific phases with set time-horizons. Pathways link actions in specific sequences that consider information regarding the timing, thresholds, and trigger points that define the points which require action to be taken.
- Organize flexible adaptation pathway results into a Flexible Adaptation Pathway Report summarizing the approach and findings of the evaluation, including:
  - Relevant background and literature review
  - Summary of the flexible adaptation pathway approach
  - Overview of the adaptation actions identified
  - Description of the selected time horizons
  - Resulting flexible adaptation pathways identified
- Develop an Excel or web-based tool that allows the Recipient to continuously update the flexible adaptation pathway over time as new information becomes available. The Flexible Adaptation Tool will have a predetermined set of inputs and outputs and will be designed as a stand-alone tool (i.e. all directions for use will be incorporated).

### **Products:**

- Resilience Assessment
- Flexible Adaptation Pathway Report
- Flexible Adaptation Tool

## **TASK 4 INNOVATIVE ZEV APPROACHES**

The goal of this task is to evaluate how the Recipient's position as an industry convener can result in adoption of MD/HD ZEV technology adoption industry-wide, including the use of shared ZEV infrastructure, the Marine 580 (M-580) inland waterway corridors, and approaches to leveraging LCFS credits to catalyze growth.

### **The Recipient shall:**

- Evaluate opportunities to leverage shared infrastructure to support the Recipient's own fleet along with ZEVs of its partners, including:
  - Identify the actions and milestones needed for implementation of MD/HD ZEVs and ZEV charging or refueling infrastructure, as follows:
  - Quantitative goals and specific, realistic timelines for installation and implementation of MD/HD electric vehicle (EV) charging and/or hydrogen refueling infrastructure within the project.
  - Potential sites, maps, and accessibility to travel routes identified for proposed MD/HD charging and/or refueling.
    - Identify optimal locations for MD/HD ZEV infrastructure deployment and the rationale for being considered optimal.
    - MD/HD vehicle and equipment usage and driving patterns in order to maximize and optimize the type and placement of ZEV infrastructure to support the MD/HD ZEVs.
  - Include appropriate Vehicle-Grid Integration (VGI) standards and open standards-based network communications.
    - Include 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.
    - Include how the project integrates energy storage for the electricity grid or uses curtailed or dedicated renewable energy as a source for renewable hydrogen.
  - Include 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.
  - Include other methods for enhancing grid-reliability by providing data to utilities to predict charging behavior and associated impacts on the grid.

- Identify steps already taken or that will need to be taken in order to ensure a safety plan is in place for needed hydrogen refueling infrastructure. This may include, but is not limited to, coordination with the Pacific Northwest National Laboratory's Center for Hydrogen Safety's Hydrogen Safety Panel.
- Submit an Agricultural Goods Movement Shared ZEV Infrastructure Evaluation documenting the potential benefits for shared infrastructure to reduce capital and operational cost barriers to ZEV adoption.
- Assess the potential to leverage the M-580 to accelerate ZEV adoption rates.
  - Assess how ZEV technology can be incorporated into the findings reported in Caltran's M-580 Corridor Multimodal Freight Network Optimization Study.
  - Analyze the combination of technologies and systems that offer the best mix of economic, environmental, and technical performance specific to the project/region.
    - Explore innovative MD/HD charging and hydrogen refueling options to address potential infrastructure barriers.
  - 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.
  - Submit a ZEV M-580 Benefits Assessment that incorporates the potential benefits of utilizing the M-580 as part of a regional approach to deploying ZEVs and the additional impacts and considerations of ZEV deployment within the framework of the Caltrans M-580 Corridor Multimodal Freight Network Optimization Study.
- Evaluate the potential benefits associated with the LCFS when ZEV infrastructure is deployed.
  - Submit a Low Carbon Fuel Standard Opportunity Report documenting the assumptions and values of the program to support the accelerated deployment of ZEV technologies.

### **Products:**

- Agricultural Goods Movement Shared ZEV Infrastructure Evaluation
- ZEV M-580 Benefits Assessment
- Low Carbon Fuel Standard Opportunity Report

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

## **TASK 5 KNOWLEDGE TRANSFER**

The goal of this task is to conduct outreach to key stakeholders across the agricultural goods movement supply chain so that the Blueprint can be adopted, adapted, utilized, and replicated.

### **The Recipient shall:**

- Identify goals to reduce greenhouse gas (GHG) emissions, criteria air pollutants, and toxic air contaminants for the region, and the emitters at the local level that would need to be targeted.
- Summarize the types of jobs that will be created for the local community.
- 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 stakeholders that could benefit from the Blueprint findings outside of the core group of participants and technical advisors.
- Create a Blueprint Findings Presentation to summarize the key findings and resources developed through the blueprint process.
- Conduct outreach to stakeholders that participated in Task 2 outreach and the newly identified additional stakeholders.
- Submit a Summary of Knowledge Transfer Outreach Activities to document the organizations that were addressed and any feedback provided.

### **Products:**

- Blueprint Findings Presentation
- Summary of Knowledge Transfer Outreach Activities

## **TASK 6 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 (6) six High Quality Digital Photographs (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.

**Products:**

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

**TASK 7 BLUEPRINT**

The goal of this task is to formalize the information gathered through Task 2 Community and Stakeholder Engagement, Task 3 Flexible Adaptation Pathways, and Task 4 Innovative ZEV Approaches into a formal Blueprint that can be shared with key stakeholders.

**The Recipient shall:**

- Prepare a Blueprint Outline that conveys the intended structure of the Blueprint and the intended goals and outcomes of major sections.
- Integrate findings from the Technical Tasks into the Blueprint Outline.
- Complete Blueprint draft.
- Incorporate feedback as provided by the CAM.
- Prepare Blueprint final.

**Products:**

- Blueprint Outline
- Blueprint (draft and final)

**TASK 8 DATA COLLECTION**

The goal of this task is to collect data from the project and include this in regular progress reports and the Final Report, if any, according to statutory requirements. Because this is only a blueprint planning agreement, it is not expected that there will be any physical construction that would result in data collection, as listed below. However, if this agreement did result in physical construction, the minimum data collection requirements are listed below.

**The Recipient shall:**

- Collect the following data:



- Number, type, date, and location of chargers or hydrogen refueling stations installed
- Nameplate capacity of the installed equipment, in kW for chargers and kg/day for hydrogen
- Number and type of outlets per charger
- Location type, such as street, parking lot, hotel, restaurant, or multi-unit housing
- Total cost per charger or refueling station, the subsidy from the CEC per charger or refueling station, federal subsidy per charger or refueling station, utility subsidy per charger or refueling station, and privately funded share per charger or refueling station
- Data on chargers over a twelve-month period, including:
  - Number of charging or refueling sessions
  - Average session duration
  - Average kWh or kg dispensed
  - Average charger or refueling station downtime
- Submit all data described above, if any, in a quarterly progress report throughout the duration of the agreement.
- Discuss data, information, and analysis described above, if any, in the Final Report

**Products:**

- Data collection on other relevant data and information described above, if any, will be submitted electronically in a quarterly progress report.
- Data collection, analysis, and discussion, if any, will be included in the Final Report

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: SSA PACIFIC, INC.

**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 ZVI-21-015 with SSA Pacific, Inc. for a \$200,000 grant to develop a blueprint that will establish a replicable strategy to create a zero-emission vehicle (ZEV) on- and off-road logistics chain to support agricultural goods movement in California; and

**FURTHER BE IT RESOLVED**, that the Executive Director or their 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 February 16, 2022.

AYE:

NAY:

ABSENT:

ABSTAIN:

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Liza Lopez  
Secretariat