



STATE OF CALIFORNIA

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

**A) New Agreement # ZVI-21-001**

B) Division	Agreement Manager:	MS-	Phone
Fuels and Transportation Division	Matthew Kozuch	27	916-477-1564

C) Recipient's Legal Name	Federal ID #
MHX, LLC	81-4805195

D) Title of Project
MHX Intermodal ZEV Blueprint for Heavy Goods Movement

**E) Term and Amount**

Start Date	End Date	Amount
11/15/2021	03/31/2023	\$ 200,000

**F) Business Meeting Information**

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

Proposed Business Meeting Date: 11/15/2021 Consent ☒ Discussion

Business Meeting Presenter: Kate Reid Time Needed: 5 minutes

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

**Agenda Item Subject and Description:**

MHX, LLC. Proposed resolution approving Agreement ZVI-21-001 with MHX, LLC for a \$200,000 grant to develop a planning "blueprint" document that will identify solutions for MD/HD EV recharging and hydrogen refueling across key nodes of California's intermodal logistics system, and adopting staff's determination that this action is exempt from CEQA. (Clean Transportation Program funding.) Contact: Matt Kozuch. (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: 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.



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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)

<b>Legal Company Name:</b>	<b>Budget</b>
Build Momentum (d.b.a. Momentum)	\$ 200,000
Schneider Electric USA, Inc.	\$ 5,000
North American Council for Freight Efficiency	\$ 5,000

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

<b>Legal Company Name:</b>

**J) Budget Information**

<b>Funding Source</b>	<b>Funding Year of Appropriation</b>	<b>Budget List Number</b>	<b>Amount</b>
General Fund	FY 21/22	601.129ZEV	\$ 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 #:



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

Name: Daele Mather

Address: 801 K Street, Suite 2700

City, State, Zip: Sacramento, CA  
95814

Phone: (916)-545-7081

E-Mail: daele@buildmomentum.io

**2. Recipient's Project Manager**

Name: Vincent McLeod III (Rick)

Address: 22707 S Wilmington  
Avenue

City, State, Zip: Carson, CA 90745

Phone: (909)-234-7673

E-Mail: rickm@mhx.solutions

**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
2. Exhibit B, Budget Detail
3. CEC 105, Questionnaire for Identifying Conflicts
4. Recipient Resolution
5. CEQA Documentation

☒ N/A☒ N/A☒ Attached☒ Attached☒ Attached☐ Attached☐ Attached

Elizabeth John for Matthew Kozuch 09/30/2021  
**Agreement Manager** **Date**

Elizabeth John 09/30/2021  
**Office Manager** **Date**

John Butler II 10/1/2021  
**Deputy Director** **Date**

## Exhibit A SCOPE OF WORK

### TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2	X	Community and Stakeholder Engagement
3	X	Blueprint Development
4		Project Fact Sheet
5		Blueprint
6		Data Collection

### KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Rick McLeod (MHX)	Build Momentum (d.b.a. Momentum)	
2	Rick McLeod (MHX)	Momentum	
3	Rick McLeod (MHX)	Momentum, Schneider Electric USA, Inc., North American Council for Freight Efficiency (NACFE), TBD	
4	Rick McLeod (MHX)	Momentum	
5	Rick McLeod (MHX)	Momentum	
6	Rick McLeod (MHX)	Momentum	

### GLOSSARY

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

Term/ Acronym	Definition
AHJ	Authorities Having Jurisdiction
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
Clean Transportation Program	Formerly known as Alternative and Renewable Fuel and Vehicle Technology Program
CPR	Critical Project Review
DAC	Disadvantaged Community
EVI	Electric Vehicle Infrastructure
EVSE	Electric Vehicle Supply Equipment

Term/ Acronym	Definition
FTD	Fuels and Transportation Division
GHG	Greenhouse Gas
LD	Light-Duty
MD/HD	Medium- and Heavy-Duty
NACFE	North American Council for Freight Efficiency
Recipient	MHX, LLC
TAC	Technical Advisory Council
ZEV	Zero-Emission Vehicle. This may include on- and off-road vehicles, equipment, and harbor craft.

## 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. On July 12, 2021, the Governor approved Senate Bill 129-Budget Act of 2021 (Skinner, Chapter 69, Statutes of 2021) that allocated General Funds to zero-emission infrastructure to support and accelerate zero-emission vehicle and infrastructure deployment in the state. To implement this direction, the CEC released a First Revised Notice of Proposed Awards to award and fully fund the projects passing solicitation scoring, but were not funded due to unavailable funds. In response to GFO-20-601, the Recipient submitted Proposal #21, which was proposed for funding in the CEC's First Revised Notice of Proposed Awards on August 16, 2021. GFO-20-601 and the Recipient's

aforementioned proposal 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. 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.

Note: For clarity, the text in the Recipient's Application regarding the participation of EV Alliance, Inc. and Tesla as subcontractors (see e.g., Narrative, pp. 3-4) is superseded. Neither EV Alliance, Inc. nor Tesla are subcontractors.

### **Problem Statement:**

Toxic air contaminants and greenhouse gas (GHG) emissions in the Los Angeles air basin are heavily concentrated in the vicinity of the Ports of Long Beach and Los Angeles and their associated goods movement corridors. Heavy-duty diesel trucks in the area are creating particularly negative public health impacts for many low-income communities that surround the Ports and the I-710 Heavy-Duty Corridor that connects the Ports with the Pomona Freeway (SR-60). As a multi-modal epicenter of heavy goods movement, the Ports, the I-710 Heavy-Duty Corridor, and associated intermodal transfer facilities will require an integrated zero-emission vehicle (ZEV) blueprint planning and engagement process to facilitate an accelerated, forward-thinking, and cost-effective ZEV transition.

MHX—a premier transload and transportation service provider—will work with key subcontractors, including Momentum, Schneider Electric, and the North American Council for Freight Efficiency (NACFE)—to craft the MHX Intermodal ZEV Blueprint for Heavy Goods Movement. Because MHX links directly with each of the key intermodal system operators named above, MHX is a uniquely positioned “hub entity” to identify solutions for MD/HD electric vehicle (EV) recharging and hydrogen refueling across these key nodes of California's intermodal logistics ecosystem.

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

The MHX Multi-Modal ZEV Blueprint for Heavy Goods Movement Project goals are to:

1. Enable MHX to fully equip its fleet with heavy-duty ZEVs & resilient charging/hydrogen refueling infrastructure.
2. Provide replicable strategies for the deployment of zero-emission medium- and heavy-duty fleets.
3. Articulate a holistic and futuristic view of freight planning – with a special focus on heavy goods movement at intermodal terminals in California's leading ports and railyards.

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

MHX has set these key objectives:

1. Engage internal and external stakeholders to develop a comprehensive and economic approach to rapidly deploying MD/HD ZEV infrastructure. Quantitative metrics may include number of stakeholders targeted, number of stakeholders engaged, and ZEV planning processes initiated through customers and allied coalitions.
2. Define internal and third-party fleet operator and driver needs to identify critical performance specifications critical to MHX, customer, and logistics partner needs. Quantitative metrics may include refuel/recharge time, infrastructure availability, cost, and environmental impact.

3. Identify workforce education and training resources to prepare maintenance technicians for MD/HD ZEVs. Quantitative metrics may include number of existing training programs and qualifications mapping of existing and new skillsets.
4. Advance facility site design to vet the design process and identify real-world operability considerations given existing utilization and smart-charging/hydrogen refueling opportunities. Quantitative metrics may include number of conceptual site designs completed, capabilities for ZEV recharging/hydrogen refueling (number of trucks served per day and range per hour of charging or refueling provided), electrical capacity upgrades (kW), and peak capacity for concurrent charging/hydrogen refueling (number of trucks served at various charging or refueling rates).
5. Develop a phased approach to infrastructure deployment that maintains flexibility to react to changes to a nascent market with rapidly evolving technology. Quantitative metrics may include interoperability (e.g., charging or hydrogen refueling standards that can be used for multiple vehicle types), cost estimates, and energy modeling (e.g., power demand, energy use, energy cost).
6. Map the ecosystem of strategic partners and business model innovations supported by ZEV market adoption. Quantitative metrics include financial modeling and risk analysis.

## **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 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, 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, if requested by the CAM.
- Prepare a Final Report following the latest version of the Final Report guidelines which will be provided by the CAM. The CAM shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

**Products:**

- *Outline of the Final Report, if requested*
- *Draft Final Report*
- *Final Report*

**Task 1.6 Identify and Obtain Matching Funds**

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

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the 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 COMMUNITY AND STAKEHOLDER ENGAGEMENT**

The goal of this task is to bring together industry participants, stakeholders, and advocates to foster productive dialogue around the deployment of MD/HD ZEV infrastructure and vehicles to support a new paradigm in clean transportation.

**The Recipient shall:**

- Develop a *Community Stakeholder Engagement Plan* to identify the purpose of its engagement with communities and stakeholders (tailored to MHX-served communities in Los Angeles and San Bernardino Counties including Fontana, Carson, Vernon, Helendale, and Rancho Cucamonga), as well as the goals and intended outcomes of the outreach by stakeholder segment. The plan will:
  - Highlight an outreach and engagement strategy tailored to local communities.
  - Describe how outreach will gather regionally specific guidance designed to:
    - Minimize the risks and uncertainties surrounding the design, permitting, planning, and financing of the ZEV network.
    - Support grid delivery, reliability, and resiliency, and to address any impacts of increased charging on utility rates.
    - Educate stakeholders on the benefits of ZEV vehicle and infrastructure adoption.
  - Identify education and outreach materials appropriate for stakeholders in the languages needed for the community.
  - Highlight how the project team will work to engage key stakeholders including: local governments, utilities, regional workplaces, business owners and operators, regional community-based organizations, community leaders, native tribes, local residents, and financial institutions.
- Provide a copy of the draft and final *Community Stakeholder Engagement Plan* to the CAM.
- Develop a *List of Outreach Targets* for *Community Stakeholder Engagement Plan* execution. Planned stakeholder engagement strategies will include, but are not limited to:
  - Engagement of electric utilities. Southern California Edison (SCE) and Pacific Gas & Electric (PG&E) will be engaged to identify:
    - Which incentives and rates will apply to the MHX fleet.
    - How the MHX EV infrastructure can be optimized to support grid delivery, reliability, and resiliency, as well as to reduce grid impact.
    - Strategies to access existing and planned utility programs supporting the development of MD/HD ZEV infrastructure, including rebates and preferential tariffs.
  - Engagement of local jurisdictions and planning organizations to ensure they are involved in planning and permitting of the infrastructure. Key activities include:
    - Outreach to the South Coast Air Quality Management District (SCAQMD) to align the MHX Blueprint with Clean Air Plan and related ZEV initiatives and incentives.
    - Outreach to local building departments to assess the permitting process for the installation of ZEV charging and hydrogen refueling infrastructure and relevant distributed energy resource (DER) technologies.

- Documenting actions or steps already adopted by local, state, and federal jurisdictions and the impact of those actions on the development of MD/HD ZEV infrastructure and the electrification of multimodal transportation.
- Engagement of local Authorities Having Jurisdiction (AHJ) with best-practice information related to planned ZEV infrastructure installations – including unincorporated San Bernardino County, Fontana, Carson, Vernon, Helendale, and Rancho Cucamonga.
- Engagement of 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. Key activities include:
  - Engage community colleges, CBOs, community leaders, and residents in Fontana, Carson, Vernon, Helendale, Rancho Cucamonga in the planning process and to provide education on ZEV and ZEV infrastructure benefits.
  - Outreach to local community leaders, CBOs, and business owners or operators to develop workforce development strategies that will enable training, education, and readiness for the local community workforce to obtain the knowledge, skills, and ability to develop, support, and maintain the MD/HD ZEV fleets.
  - Coordinate and align MHX Electric Vehicle Supply Equipment (EVSE) plans with the Port of Los Angeles, Port of Long Beach, and relevant SCAQMD initiatives to create alignment with existing and new EVI designs, plans, and funding.
  - Engage (at a minimum) these leading MHX customers and logistics partners to participate in the Blueprint planning process via the Technical Advisory Council (TAC) and to provide education on ZEV benefits: Union Pacific, BNSF, SSA Marine, Pasha, USS-Posco, Rio Tinto, Salt River Materials Group, and Plastic Express.
- Engagement of financial institutions to ensure they are educated, involved, and committed to participate in the implementation of the MD/HD ZEV infrastructure blueprint.
  - Identify clean energy infrastructure financiers with a history of supporting the development, installation, and operation of renewable energy technologies including DER technologies, microgrids, light-duty (LD) ZEV infrastructure, and renewable fuels projects. Examples include, First Third Bank, Generate Capital, and providers/financiers of Charging-as-a-Service, such as Amply, and InCharge.
  - Engage relevant financiers in discussions to understand new and innovative business models around energy-as-a-service, incentive and credit monetization, third-party ZEV fueling operations, and other innovative options.
- Provide a copy of the *List of Outreach Targets for Community Stakeholder Engagement Plan* to the CAM.

- Engage the community and stakeholders as identified in the *Community Stakeholder Engagement Plan*.
- Produce relevant *Multi-Language Outreach and Education Materials* consistent with the *Community Stakeholder Engagement Plan*. Provide copies to the CAM.
- Identify steps that will need to be taken in order to ensure a safety plan is in place for potential hydrogen refueling infrastructure.
- Develop products to provide replicable models for ZEV fleet transformation in the MD/HD segment. These include:
  - *ZEV Fleet Planning for Heavy Goods Movement: Case Study of MHX – A Regional Intermodal Logistics Provider*
  - *Accelerating Intermodal Sustainability: A Guide to the ZEV Transformation of Intermodal Freight Terminals* that includes components on truck-to-ship and truck-to-rail intermodal transfer, and strategies for electric charging and hydrogen refueling MD/HD over-the-road trucks, drayage equipment, and forklifts.
  - *Fleet Finance Symposium Presentation* for a MD/HD ZEV Finance Symposium (webinar format) to provide information on financing innovations relevant to the Blueprint process.
- Provide draft and final copies of the three products listed above to the CAM.
- Form a Technical Advisory Council (TAC) that consists of community and industry leaders with knowledge of freight logistics, transportation electrification, or related environmental issues.
- Host two TAC meetings over the course of the project and facilitate one-on-one engagement with relevant TAC members
- Produce a *List of TAC Members* and *TAC Meeting Reports* for each of the two meetings
- Provide copies of the *List of TAC Members* and *TAC Meeting Reports* to the CAM.
- Develop a *Community and Stakeholder Engagement Report* that identifies:
  - 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 key findings aggregated by stakeholder segment.
- Provide a copy of the *Community and Stakeholder Engagement Report* to the CAM.

#### **Products:**

- *Community and Stakeholder Engagement Plan* (draft and final)
- *List of Outreach Targets*
- *Multi-Language Outreach and Education Materials*



- *ZEV Fleet Planning for Heavy Goods Movement: Case Study of MHX – A Regional Intermodal Logistics Provider* (draft and final)
- *Accelerating Intermodal Sustainability: A Guide to the ZEV Transformation of Intermodal Freight Terminals* (draft and final)
- *Fleet Finance Symposium Presentation* (draft and final)
- *List of TAC Members*
- *TAC Meeting Reports (two reports)*
- *Community and Stakeholder Engagement Report*

**[CPR WILL OCCUR DURING THIS TASK. See Task 1.2 for details.]**

### **TASK 3 BLUEPRINT DEVELOPMENT**

The goal of this task is to gather the information necessary to develop a replicable and actionable Blueprint that guides future investment into MD/HD ZEV infrastructure.

#### **The Recipient shall:**

- Facilitate and conduct technology and systems analysis of ZEV vehicles and infrastructure. Relevant technology options may include wireless charging, high-powered charging, solar chargers, robotic chargers, hydrogen refuelers and mobile chargers suitable for MD/HD ZEV vehicles and related support equipment.
- Analyze the combination of technologies and systems that offer the best mix of economic, environmental, and technical performance specific to the project given current technological constraints.
- Explore innovative MD/HD charging and hydrogen refueling options to address infrastructure challenges and barriers, such as:
  - Vehicle-Grid Integration (VGI) standards and open standards-based network communications
  - Standards that support emerging connectors and/or interfaces for heavy-duty vehicles
  - Methods for enhancing grid-reliability by providing data to utilities to predict charging behavior and associated impacts on the grid
  - Interoperability of MD/HD charging connectors and/or charging interfaces
  - Engagement with original equipment manufacturers of MD/HD vehicles to understand their visions for connectors and interfaces
  - Identification of analytical tools, software applications, and data requirements to improve future MD/HD ZEV infrastructure planning activities
- Develop *System and Technology Presentations and Summary of Findings*.
- Provide a copy of the *System and Technology Presentations and Summary of Findings* to the CAM.
- Develop quantitative goals and specific, realistic timelines for installation and implementation of MD/HD EV charging infrastructure within the project.

- Produce a *List of MD/HD ZEV Goals and Installation Timeline*.
- Provide a copy of the *List of MD/HD ZEV Goals and Installation Timeline* to the CAM.
- Conduct a siting assessment to identify high-impact EVSE and hydrogen refueling deployment. Activities to be conducted include:
  - Evaluate MD/HD vehicle usage and driving patterns in order to maximize and optimize the type and placement of ZEV infrastructure to support the MD/HD ZEVs.
  - Develop charging location and hydrogen refueling location decision matrices which include a focus on intermodal electrification and hydrogen refueling requirements to support lowest-carbon movement of goods and produce across California.
  - Identify and map optimal locations for MD/HD ZEV infrastructure deployment and provide the rationale for being considered optimal. Include potential sites, maps, and accessibility to travel routes identified for proposed MD/HD charging and/or hydrogen refueling.
- Develop specific *Zero-Emission Infrastructure Plans* for each of the MHX locations where MD/HD ZEV will be charged/refueled based on the siting assessment.
- Provide a copy of the *Zero-Emission Infrastructure Plans* to the CAM.
- Develop a high-level *Microgrid Scoping Analysis* for each priority facility. This analysis will include:
  - Utility bill assessment
  - Site assessment
  - Storage system sizing calculation and modeling to simulate performance
  - Financing assessment and pro forma to identify relevant incentives and financing opportunities, including but not limited to the Self-Generation Incentive Program (SGIP) and other state, local, and federal programs, as well as solar power purchase agreements (PPAs), tax credits and accelerated depreciation, and other private sector financing strategies
- Provide a copy of the draft and final *Microgrid Scoping Analysis* to the CAM.
- Evaluate software-optimized charging strategy that optimizes charging based on:
  - Utility rates, which includes demand charges and time-of-use (TOU) pricing
  - Rates of charge that satisfy operational needs
  - MHX fleet operational needs and constraints and input from MHX's Supply Chain Management System (SCMS) and other relevant data streams
- Present the resulting strategy *Smart Charging and Hydrogen Refueling Assessment* and provide a draft and final copy to the CAM.

- Develop a *ZEV Benefit Report*. The report will:
  - Summarize the types of jobs that will be created for the local community and regional industries.
  - Identify strategies that will enable training, education, and readiness for the local workforce to obtain skills, knowledge, and abilities to develop, support, and maintain MD/HD ZEV fleets, and to implement the blueprint. The MHX team will draw on EV workforce data and resources identified in previous EV plans and regional workforce institutions (including Community Colleges and Driver Training Institutes) to identify workforce strategies that will help job seekers and trainees to develop, support, and maintain ZEV fleets.
  - Identify benefits of reducing GHG emissions, criteria air pollutants, and toxic air contaminants for the region based on a ZEV fleet conversion.
  - Identify the benefits that would accrue to disadvantaged communities (DACs), low-income communities, priority populations, and tribal lands -- addressing health and safety, access & education, financial benefits, economic development, and consumer protection.
  - Identify economic, health and safety and consumer benefits that will accrue to low-income, DAC, and priority populations in the MHX service territory. The focus will be on priority populations in San Bernardino County and the communities surrounding the Ports of Los Angeles and Long Beach.
- Provide a copy of the draft and final *ZEV Benefit Report* to the CAM.

#### **Products:**

- *System and Technology Presentations and Summary of Findings*
- *List of MD/HD ZEV Goals and Installation Timeline*
- *Zero-Emission Infrastructure Plans*
- *Microgrid Scoping Analysis* (draft and final)
- *Smart Charging and Hydrogen Refueling Assessment* (draft and final)
- *ZEV Benefit Report* (draft and final)

**[CPR WILL OCCUR DURING THIS TASK. See Task 1.2 for details.]**

#### **TASK 4 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) from the project.

**Products:**

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

## **TASK 5 BLUEPRINT**

The goal of this task is to formalize the information gathered through the Task 2 and Task 3 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.
- Provide a copy of the *Blueprint Outline* to the CAM.
- Integrate findings from the Technical Tasks into the Blueprint Outline.
- Complete *Draft Blueprint*.
- Provide a copy of the *Draft Blueprint* to the CAM.
- Incorporate feedback as provided by the CAM.
- Prepare *Final Blueprint*.
- Provide a copy of the *Final Blueprint* to the CAM.

**Products:**

- *Blueprint Outline*
- *Draft Blueprint*
- *Final Blueprint*

## **TASK 6 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 applicable under statutory requirements. Because this is only a blueprint planning agreement, it is not expected that within this agreement there will be any physical construction of charging or hydrogen refueling infrastructure that would result in statutorily-required data collection, as listed below.

**The Recipient shall, if applicable:**

- 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:**

- If applicable, data collection on other relevant data and information described above, if any, will be submitted electronically in a quarterly progress report.
- If applicable, 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: MHX, LLC

**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-21-001 with MHX, LLC for a \$200,000 grant to develop a planning “blueprint” document that will identify solutions for MD/HD EV recharging and hydrogen refueling across key nodes of California’s intermodal logistics system; 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 November 15, 2021.

AYE:

NAY:

ABSENT:

ABSTAIN:

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Liza Lopez  
Secretariat