



STATE OF CALIFORNIA

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

**A) New Agreement # ARV-21-021 (to be completed by CGL office)**

B) Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Akasha Kaur Khalsa	27	916-891-9128

C) Recipient's Legal Name	Federal ID #
Central Concrete Supply Co., Inc.	94-1181859

D) Title of Project
Blueprint for Zero Emission Concrete Logistics

**E) Term and Amount**

Start Date	End Date	Amount
8 / 11 / 2021	03 / 31 / 2023	\$ 200,000

**F) Business Meeting Information**

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

Proposed Business Meeting Date 8 / 11 / 2021 ☐ Consent ☒ Discussion

Business Meeting Presenter Kathryn Reid Time Needed: 5 minutes

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

**Agenda Item Subject and Description:**

CENTRAL CONCRETE SUPPLY CO., INC. Proposed resolution approving Agreement ARV-21-021 with Central Concrete Supply Co., Inc. for a \$200,000 grant to develop the blueprint for Zero Emission Concrete Logistics Project with conceptual electric charging and hydrogen fueling infrastructure designs; a comprehensive technology assessment for ZEVs and site infrastructure; detailed energy analyses, a workforce development plan, and actionable strategies to accelerate the deployment of MD/HD ZEVs and ZEV infrastructure, and adopting staff's determination that this action is exempt from CEQA. (Clean Transportation Program funding.) Contact: Akasha Kaur Khalsa. (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: 14 CCR section 15306 – Information Collection

☐ Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section: Cal. Code Regs, tit. 14, §15306, Information Collection, provides that projects which consist of basic data collection, research and resource evaluation activities which do not result in a serious or major



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disturbance to an environmental resource are categorically 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
Arup US, Inc.	\$ 134,661.00
Build Momentum	\$ 65,339.00
	\$

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

Legal Company Name:
US Concrete, Inc., Rock Transport, Inc., Right Away Redy Mix, Inc.
Chico State Concrete Industry Management, UCLA Institute for Carbon Management,
Massachusetts Institute of Technology Concrete Sustainability Hub

**J) Budget Information**

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

R&D Program Area: N/A TOTAL: \$

Explanation for "Other" selection

Reimbursement Contract #:

Federal Agreement #:

**K) Recipient's Contact Information**



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CALIFORNIA ENERGY COMMISSION

## 1. Recipient's Administrator/Officer

Name: Juan Gonzalez

Address: 755 Stockton Ave.

City, State, Zip: San Jose, CA 95126

Phone: (408) 293-6272

E-Mail: [jgonzalez@us-concrete.com](mailto:jgonzalez@us-concrete.com)

Name: Matt Hart

Address: 801 K Street, Suite 2700

City, State, Zip: Sacramento, CA  
95814

Phone: (650) 796-6288

E-Mail: [matt@buildmomentum.io](mailto:matt@buildmomentum.io)

## 2. Recipient's Project Manager

## 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 | Attached |
| 5. CEQA Documentation                               | <input checked="" type="checkbox"/> N/A | Attached |

## Agreement Manager

Date \_\_\_\_\_

## Office Manager

Date \_\_\_\_\_

## Deputy Director

**Date**

## Exhibit A SCOPE OF WORK

### TECHNICAL TASK LIST

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

### KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Juan Gonzalez Alana Guzzetta Robert McGehee	Build Momentum (Momentum)	
2	Juan Gonzalez Alana Guzzetta Robert McGehee Ricardo Ramirez James Dumont	Momentum Arup US, Inc. (Arup)	US Concrete, Inc. Rock Transport, Inc. Right Away Redy Mix, Inc. Chico State, Concrete Industry Management UCLA Institute for Carbon Management Massachusetts Institute of Technology, Concrete Sustainability Hub
3	Raphael Sperry Ewan Frost- Pennington	Arup Momentum	
4	James Dumont	Arup Momentum	
5	James Dumont	Arup Momentum	

## GLOSSARY

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

Term/ Acronym	Definition
BAAQMD	Bay Area Air Quality Management District
CAO	Commission Agreement Officer
CAM	Commission Agreement Manager
CEC	California Energy Commission
Central Concrete	Central Concrete Supply Co., Inc.
Clean Transportation Program	Formerly known as Alternative and Renewable Fuel and Vehicle Technology Program
CapEx	Capital Expenses
CPR	Critical Project Review
DER	Distributed Energy Resources
FTD	Fuels and Transportation Division
GHG	Greenhouse Gas
MD/HD	Medium-Duty and Heavy-Duty
OpEx	Operational Expenses
ROI	Rates of Return on Investment
Recipient	Central Concrete Supply Co., Inc.
TCO	Total Cost of Ownership
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. In response to GFO-20-601, the Recipient submitted Proposal #5, which was proposed for funding in the CEC’s Notice of Proposed Awards on April 8, 2021. GFO-20-601 is hereby incorporated by reference into this Agreement in their entirety.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient’s Application, the Solicitation shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the terms of the Recipient’s Application, the terms of this Agreement shall control.

### **Problem Statement:**

Emissions from petroleum transportation fuels contribute to global climate change. However, many of California’s fleet owners do not have experience with medium-duty and heavy-duty (MD/HD) vehicle fueling alternatives. A solution is publicly-shared detailed transportation planning for MD/HD zero-emission vehicles (ZEVs) and ZEV infrastructure considering the unique needs within one industry.

California’s concrete industry is one of the state’s most important economic drivers, directly employing thousands of people across the state, laying a literal and figurative foundation for much of the state’s economy, bringing in billions of dollars in revenue, and operating in all kinds of communities across the state. This industry contains fleets of thousands of heavy-duty vehicles including ready-mix concrete delivery trucks as well as fleets for hauling the cement, sand, and gravel of which concrete is made. This industry consists of a highly diverse and disaggregated set of companies, making education about ZEV and ZEV infrastructure options challenging. Central Concrete Supply Co., Inc. (Central Concrete) shall develop and publish a planning “Blueprint” document to address this education and information gap, using Central Concrete’s unique position as a sustainability leader in the concrete industry to showcase, and demonstrate, the value of ZEVs to decarbonizing the concrete industry.

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

The goal of this Agreement is to design and develop an implementable and replicable MD/HD Blueprint that will explore available electric charging and hydrogen refueling infrastructure to accelerate the adoption and deployment of MD/HD ZEV infrastructure across California’s concrete industry as well as introduce the idea of MD/HD ZEVs to the broader construction industry.

## **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 deploy MD/HD ZEV infrastructure.
- Define and prioritize vehicle and equipment types most suited for early transition to ZEV technologies.
- Define critical performance specifications that are important for each MD/HD ZEV for each duty cycle and maintaining best-in-class service.
- Identify workforce education and training resources to prepare drivers and maintenance technicians for MD/HD ZEVs on the road as well as charging and refueling infrastructure at Central Concrete's facilities.
- Prepare a facility site design for a representative facility, such as Central Concrete San Francisco plant on 450 Amador St, San Francisco, CA (Pier 92), near marine terminals where aggregates are received, to vet the infrastructure design process and identify real-world operability considerations given existing uses.
- Develop a phased approach to infrastructure deployment that maintains flexibility to react to changes to a nascent market with rapidly evolving technology.
- Develop two improved total cost of ownership (TCO) models to help MD/HD fleet and facility operators better understand the capital expenses (CapEx), operational expenses (OpEx), and rates of return on investment (ROI) associated with both vehicles and infrastructure for hydrogen fueled and battery electric vehicles.
- Map the ecosystem of strategic partners and business model innovations supported by ZEV market adoption.
- Develop and share a replicable strategy for deploying ZEVs and ZEV infrastructure throughout the concrete supply chain.

## **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 CEC Accounting Office. The Recipient shall bring their Project Manager, Agreement Administrator, Accounting Officer, and any others determined necessary by the Recipient or specifically requested by the CAM to this meeting.
- Discuss the following administrative and technical aspects of this Agreement:
  - Agreement Terms and Conditions
  - Critical Project Review (Task 1.2)
  - Match fund documentation (Task 1.6) No reimbursable work may be done

until this documentation is in place.

- Permit documentation (Task 1.7)
- Subcontracts needed to carry out project (Task 1.8)
- The CAM's expectations for accomplishing tasks described in the Scope of Work
- An updated Schedule of Products and Due Dates
- Monthly Progress Reports (Task 1.4)
- Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Final Report (Task 1.5)

**Recipient Products:**

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

**Commission Agreement Manager Product:**

- Kick-Off Meeting Agenda

**Task 1.2 Critical Project Review (CPR) Meetings**

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

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

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

**The CAM shall:**

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the CEC, but they may take place at another location or remotely.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. Prepare a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a



formal amendment (please see section 8 of the Terms and Conditions). If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for Transportation for his or her concurrence.

- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

**The Recipient shall:**

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

**CAM Products:**

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

**Recipient Product:**

- CPR Report(s)

**Task 1.3 Final Meeting**

The goal of this task is to closeout this Agreement.

**The Recipient shall:**

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

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

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

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

- What to do with any equipment purchased with CEC funds (Options)

- CEC request for specific “generated” data (not already provided in Agreement products)
- Need to document Recipient’s disclosure of “subject inventions” developed under the Agreement
- “Surviving” Agreement provisions
- Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

**Products:**

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

**Task 1.4 Monthly Progress Reports**

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

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

**The Recipient shall:**

- Prepare a Monthly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the CAM within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.
- In the first Monthly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

**Product:**

- Monthly Progress Reports

**Task 1.5 Final Report**

The goal of the Final Report is to assess the project’s success in achieving the Agreement’s goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project’s purpose,

approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.

The Final Report shall be a public document. If the Recipient has obtained confidential status from the CEC and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

**The Recipient shall:**

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

**Products:**

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

**Task 1.6 Identify and Obtain Matching Funds**

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

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

**The Recipient shall:**

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

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

#### **Products:**

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

#### **Task 1.7 Identify and Obtain Required Permits**

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

Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. Although the CEC budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

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

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the CAM at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
  - A list of the permits that identifies the:

- Type of permit
- Name, address and telephone number of the permitting jurisdictions or lead agencies
- The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule, and the copies of the permits. The implications to the Agreement if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the CAM.
- As permits are obtained, send a copy of each approved permit to the CAM.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 working days. Either of these events may trigger an additional CPR.

**Products:**

- Letter documenting the permits or stating that no permits are required
- A copy of each approved permit (if applicable)
- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)
- A copy of each final approved permit (if applicable)

**Task 1.8 Obtain and Execute Subcontracts**

The goal of this task is to ensure quality products and to procure subcontractors required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement policies and procedures. It will also provide CEC an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

**The Recipient shall:**

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the CAM for review.
- Submit a final copy of the executed subcontract.
- If Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

**Products:**

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

**TECHNICAL TASKS****TASK 2 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 alternative fueling infrastructure supporting the concrete supply chain, including off-road material handling and on-road MD/HD ZEVs.

**The Recipient shall:**

- Prepare a Community and Stakeholder Engagement Plan and submit to CAM. The plan will:
  - Identify the key stakeholders, including:
    - Communities.
    - Internal companies, including the 23 facilities owned by Central Concrete, Right Away Redy Mix, and Rock Transport in the greater Bay Area.
    - External businesses.
  - Identify the goals and intended outcomes of the outreach by stakeholder segment.
  - Identify the method of engagement.
  - Identify metrics of outreach effectiveness.
- Implement the Community and Stakeholder Engagement Plan.
- Engage California's concrete industry community.
- Engage electric utilities to support grid delivery, reliability, and resiliency. Engagement will include:
  - Outreach to electric utilities servicing Central Concrete's facilities.
  - 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.
  - Input from utilities regarding impacts of increased charging utilization on utility rates.
- Engage hydrogen providers to understand plans for hydrogen production and distribution. Engagement will include:
  - Outreach to California Fuel Cell Partnership, California Hydrogen Business

- Council, and California Hydrogen Coalition.
  - 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, Praxair, and Applicants to the CEC's GFO-20-609 "Renewable Hydrogen Transportation Fuel Production."
  - Outreach to major private-sector hydrogen production equipment manufacturers, such as Nel Hydrogen, Hydrogenics/Cummins, and ITM Power.
  - Identify 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 San Francisco, City of Oakland, and Bay Area Air Quality Management District (BAAQMD) to assess the permitting process for the installation of ZEV charging and hydrogen refueling infrastructure and relevant distributed energy resources (DER) technologies.
  - Highlight actions 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 the concrete and construction industries.
- 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 utilize Central Concrete's services and products to understand their perspectives and concerns about the transition to MD/HD ZEVs.
  - Education about new and innovative technologies to solicit dialogue and conversation about the electrification of multimodal transportation and the future of sustainable freight.
  - Work with community colleges, universities, CBOs, labor unions, and community leaders to outline 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, maintain, and operate the MD/HD ZEV fleets and infrastructure as drivers, operators, and maintenance technicians.
  - Developing an outreach approach tailored to the local community, supported by education and outreach materials appropriate for potentially affected residents, in the languages needed for the community, to educate community members on the planning efforts and potential future impacts.
- Engage internal Central Concrete divisions, facility and terminal operators, and employees to foster dialogue and communication around new transportation

paradigms that are cross cutting between internal stakeholder groups.

- 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 Central Concrete's current financial partners to discuss the costs and opportunities of the transition to MD/HD ZEVs.
  - Outreach to clean energy infrastructure financiers with a history of supporting the development, installation, and operation of renewable energy technologies including DER technologies, microgrids, LD ZEV infrastructure, and renewable fuels projects.
  - Discussions to understand new and innovative business models such as energy-as-a-service, incentive and credit monetization, and third-party ZEV fueling operations.
  - Support operator awareness of CapEx, OpEx, and ROI associated with both vehicles and infrastructure.
- Engage fuel cell electric truck manufacturers such as Hydrogen Fuel Cell Kenworth/Toyota, Hyundai, and Nikola.
- Engage electric truck manufacturers such as Tesla, Freightliner, Cummins, Rivian, Daimler, Ford, and Volvo Trucks.
- Identify qualitative and quantitative metrics beyond project location to evaluate the effects of projects on local communities.
- Prepare a Community and Stakeholder Engagement Report and submit to CAM. The Report will include:
  - Organizations, companies, and stakeholders that received outreach.
  - Outcomes of such outreach (such as engaged in dialogue, declined to participate, did not respond).
  - Overview of topics discussed.
  - Summary of the key findings aggregated by stakeholder segment.

**Products:**

- Community and Stakeholder Engagement Plan
- Community and Stakeholder Engagement Report

**[CPR WILL BE HELD IN 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:**

- Develop Preliminary Design Drawings of a zero-emission representative facility (such as the Central Concrete San Francisco Pier 92) to identify specific challenges and considerations arising from both charging infrastructure and hydrogen refueling infrastructure supporting zero-emission MD/HD concrete



operations, including material handling, mixing, haulage, and arrival/departure logistical applications.

- Develop an Infrastructure Assessment Summary and submit to the CAM, that will:
  - Identify the quantitative goals, actions and milestones needed for implementation of MD/HD ZEVs and ZEV charging or refueling infrastructure.
  - Specify realistic timelines for phased installation and implementation of MD/HD electric vehicle (EV) charging and/or hydrogen refueling infrastructure within the project.
  - 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 a phased approach to infrastructure deployment that maintains flexibility to react to changes to a nascent market with rapidly evolving technology.
  - Assess the existing infrastructure at 23 facilities managed by Central Concrete or its affiliates.
    - Identify optimal locations for MD/HD ZEV infrastructure deployment.
    - Show potential sites, maps, and accessibility to travel routes identified for proposed MD/HD charging and/or refueling locations.
  - Include two total cost of ownership (TCO) models to help MD/HD fleet and facility operators better understand the capital expenses (CapEx), operational expenses (OpEx), and rates of return on investment (ROI) associated with both vehicles and infrastructure for hydrogen fueled and battery electric vehicles.
  - Include a high-level life cycle cost analysis of business-as-usual and ZEV options including costs of infrastructure, vehicles, operations, maintenance, and potential incentives including LCFS revenues, subject to the availability of public information.
- Prepare a ZEV Technologies Assessment Summary and submit to the CAM, that will:
  - Analyze the combination of technologies and systems that offer the best mix of economic, environmental, and technical performance specific to Central Concrete and the wider region.
  - Explore innovative MD/HD charging and hydrogen refueling options to address potential infrastructure barriers. Technology options may include:
    - Wireless charging

- High-powered charging
- Overhead catenary systems
- Solar chargers
- Robotic chargers
- Mobile chargers/refuelers
- Curbside, streetlamp, and intersection chargers
- Autonomous garages
- Evaluate forthcoming MD/HD zero-emission vehicle and equipment technology options relevant to Central Concrete's existing fleet to understand capital costs, technical capabilities, operational capacities, and critical performance specifications important to Central Concrete's drivers and operators.
- Define and prioritize vehicle and equipment types most suited for early transition to ZEV technologies.
- Evaluate the grid impacts and opportunities of deploying DER technologies.
- Evaluate the grid impacts and opportunities of MD/HD ZEV infrastructure.
- 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.
  - Engage with original equipment manufacturers (OEMs) of MD/HD vehicles to understand their visions for connectors and interfaces.
- Include other methods for enhancing grid-reliability by providing data to utilities to predict charging behavior and associated impacts on the grid.
  - Explore 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.
  - Explore integrating energy storage for the electricity grid, load shifting, and dedicated renewable energy as a source for renewable hydrogen.
  - Incorporate findings into the Infrastructure Assessment Summary.
  - Incorporate findings into the Task 5 Blueprint products.
- Identify steps to be taken in order to ensure a safety plan is in place for hydrogen refueling infrastructure and mobile refueling systems.

- Identify analytical tools, software applications, and data needed to improve future MD/HD ZEV infrastructure planning activities.
- Present the ZEV Technologies Assessment Summary findings to stakeholders to support the deployment of ZEVs and ZEV infrastructure throughout the concrete and aggregates industry and supply chain.
- 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.
- Prepare a ZEV Cost-Benefit Assessment Summary and submit to the CAM, that will:
  - Identify and evaluate funding and financing mechanisms—public and private—available to support the deployment of MD/HD ZEVs and ZEV infrastructure.
  - Identify workforce education and training resources to prepare drivers and maintenance technicians for MD/HD ZEVs as well as charging and refueling infrastructure at internal companies' facilities.
  - Summarize the types of jobs that will be created for the local community and regional industries by internal companies' facilities.
  - Identify the baseline greenhouse gas (GHG) emissions, criteria air pollutants, and toxic air contaminants by vehicle type using commonly accepted emissions calculation methodology (such as Carl Moyer emission calculations).
  - Identify goals to reduce GHG emissions, criteria air pollutants, and toxic air contaminants for the region. Inquire of the BAAQMD which emitters at the local level might be targeted.
  - Identify the benefits that would accrue to disadvantaged communities (DACs), low-income communities, priority populations, and/or tribal lands. Address health and safety, access and education, financial benefits, economic development, and consumer protection.
    - Estimate the benefits of ZEV for internal companies' facilities.
- Solicit technology presentations and information sharing from technology manufacturers and operators with a focus on raising awareness and enhancing educational opportunities for internal companies' employees, customers, and other interested stakeholders.
  - Provide a press release as Written Notification of Technology Presentation to the CAM.

### **Products:**

- Preliminary Design Drawings
- Infrastructure Assessment Summary
- ZEV Technologies Assessment Summary

- ZEV Cost-Benefit Assessment Summary
- Written Notification of Technology Presentation

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

##### **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 Community and Stakeholder Engagement and Task 3 Blueprint Information Assessment 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.
- Integrate findings from the Technical Tasks into the Blueprint outline.
- Complete Blueprint draft and submit to the CAM.
- Incorporate feedback as provided by the CAM.
- Prepare the final Blueprint accessible according to the Americans with Disabilities Act.
- Publish the Blueprint.
- Provide Written Notification of Blueprint Publication.

##### **Products:**

- Blueprint Outline
- Draft Blueprint
- Final Blueprint
- Written Notification of Blueprint Publication

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION CENTRAL CONCRETE SUPPLY CO., 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 ARV-21-021 with Central Concrete Supply Co., Inc. for a \$200,000 grant to develop the blueprint for Zero Emission Concrete Logistics Project with conceptual electric charging and hydrogen fueling infrastructure designs; a comprehensive technology assessment for ZEVs and site infrastructure; detailed energy analyses, a workforce development plan, and actionable strategies to accelerate the deployment of MD/HD ZEVs and ZEV infrastructure; and

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

**CERTIFICATION**

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on August 11, 2021.

AYE:

NAY:

ABSENT:

ABSTAIN:

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Liza Lopez  
Secretariat