

2017-2018 GRANT SOLICITATION

Zero- and Near Zero-Emission Freight Facilities Project

Mobile Source Control Division
California Air Resources Board
March 21, 2018



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California Air Resources Board
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I. SUMMARY

The California Air Resources Board (CARB or Board) is soliciting for several Grantees to implement and administer projects eligible for the Zero- and Near Zero-Emission Freight Facilities Project (Freight Facilities Project) under the Fiscal Year 2017-18 Funding Plan for Clean Transportation Incentives (FY 2017-18 Funding Plan).¹ Total funding for this project includes up to \$100 million from the FY 2017-18 Low Carbon Transportation Allocation² and \$50 million from the Trade Corridor Enhancement Account (TCEA).³ It is anticipated that up to \$150 million will be available under this Solicitation for the Freight Facilities Project and at least \$50 million of the total funding will be spent directly on zero- and near zero-emission warehouses, as required under Senate Bill (SB) 132.⁴

CARB's goal under the Zero-and Near-Zero Emission Freight Facility Project solicitation is to support bold, transformative emission reduction strategies that can be emulated throughout freight facilities statewide. These projects will holistically reduce greenhouse gas (GHG)⁵, criteria pollutant⁶, and toxic air contaminant⁷ emissions in and around freight facilities and to provide economic, environmental, and public health benefits to disadvantaged and low-income communities.⁸ As such, a wide variety of zero- and near zero-emission heavy-duty vehicles and off-road equipment, supporting fueling infrastructure, as well as other facility and efficiency improvements that reduce these emissions facility-wide are eligible for funding. Freight facilities, for the purpose of this Solicitation, include warehouses, distribution centers, seaports, freight airports, intermodal rail yards, cold storage warehouses, rail yard, ports of entry, and other freight facilities. Projects funded under this solicitation can support both pre-commercial technologies that are not offered for sale into the market place as well those commercial technologies that have already been deployed into the marketplace. More details on eligible components can be found in Section IX Eligible Projects. All work shall be completed by April 15, 2021. Specific tasks are outlined within this Solicitation. Applications are due to CARB no later than **5:00 p.m., July 19, 2018**.

¹ The FY 2017-18 Funding Plan is available at

https://www.arb.ca.gov/msprog/aqip/fundplan/1718_draft_funding_plan_workshop_100417.pdf

² Of the \$540 million appropriated for Low Carbon Transportation Projects in Assembly Bill (AB) 134 (Committee on Budget, Chapter 254, Statutes of 2017), \$140 million was allocated for Freight Equipment Advanced Demonstration and Pilot Commercial Deployment Projects. The FY 2017-18 Funding Plan allocated \$100 million of this amount to this freight facilities project and \$40 million to the Zero-Emission Off-Road Freight Voucher Incentive Project, which will be solicited at a later date.

³ CARB was appropriated \$50 million for a new Zero- and Near Zero-Emission Warehouse Program in SB 132 (Committee on Budget and Fiscal Review, Chapter 7, Statutes of 2017) and was included as part of the FY 2017-18 Funding Plan, per SB 108.

⁴ Ibid.

⁵ For purposes of this solicitation, please refer the definition of greenhouse gases found at the CARB website: <https://www.arb.ca.gov/cc/inventory/background/ghg.htm>

⁶ For purposes of this solicitation, please refer the definition of criteria pollutants found at the CARB website: <https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards>

⁷ For purposes of this solicitation, please refer the definition of toxic air contaminants found at the CARB website: <https://www.arb.ca.gov/toxics/id/taclist.htm>

⁸ Disadvantaged communities, as identified by the California Environmental Protection Agency, are available at <http://www.calepa.ca.gov/EnvJustice/GHGInvest/>.

This Solicitation utilizes the process established under the Assembly Bill 118 (AB 118) Air Quality Improvement Program (AQIP), with project funds coming from two sources: the Cap-and-Trade auction proceeds deposited into the Greenhouse Gas Reduction Fund (GGRF) as part of the California Climate Investments (CCI) and funds deposited into the TCEA. The project is intended to fund a wide array of technologies that further the purposes of AB 32 (Nunez, Chapter 488, Statutes of 2006) and the more recent SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels⁹, and SB 1 (Beall, Chapter 5, Statutes of 2017). This competitive Solicitation is open to local air districts or other California-based public agencies and California-based non-profit organizations that demonstrate the requisite administrative and technical expertise in overseeing large scale advanced technology deployments.

II. BACKGROUND

In 2007, the *California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007* (AB 118, Statutes of 2007, Chapter 750) was signed into law. AB 118 created AQIP, a voluntary incentive program administered by CARB, to fund clean vehicle and equipment projects, air quality research, and workforce training.

As required in Health and Safety Code (HSC) Section 44274(a), the Board adopted regulatory guidelines in 2009 for AQIP. The AQIP Guidelines (Guidelines)¹⁰ define the overall administrative requirements, policies, and procedures for program implementation based on the framework established in statute. Central to the Guidelines is the requirement for a Board-approved annual funding plan developed with public input. The funding plan is each year's blueprint for expending Clean Transportation Incentive funds appropriated to CARB in the annual State Budget. The funding plan focuses funds on supporting development and deployment of the advanced technologies needed to meet California's longer-term, post 2020 air quality goals.

In 2012, the Legislature passed, and Governor Brown signed into law, three bills – AB 1532 (Pérez, Chapter 807), SB 535 (De León, Chapter 830), and SB 1018 (Budget and Fiscal Review Committee, Chapter 39) that established GGRF to receive Cap-and-Trade auction proceeds and to provide the framework for how the auction proceeds will be administered in furtherance of the purposes of AB 32 including supporting long-term, transformative efforts to improve public health and develop a clean energy economy. The suite of implementing legislation offers strong direction for investing a portion of the auction proceeds to benefit disadvantaged communities, including specific allocation requirements in SB 535 and bolstered by AB 1550 (Gomez, Chapter 369, Statutes of 2016).

⁹ SB 32 can be found at

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

¹⁰ The Guidelines for the AB 118 Air Quality Improvement Program are available at www.arb.ca.gov/msprog/aqip/aqip.htm.

In 2014, the Legislature appropriated nearly \$200 million dollars in GGRF monies to establish a Low Carbon Transportation GGRF program that CARB is implementing in coordination with the AQIP AB 118 programs. Projects funded by the Low Carbon Transportation GGRF program must reduce GHG emissions and further the purposes of AB 32, with a strong emphasis on benefiting disadvantaged communities.

In order to identify the priority investments that facilitate GHG emission reductions, the legislature directed the development of the Cap-and-Trade Auction Proceeds Investment Plan (Investment Plan).¹¹ The second 3-year Investment Plan, which was released in January 2016, calls for projects that support the large-scale deployment of alternative technologies, such as zero- and near zero-emission vehicles, to help achieve the State's near-term and longer-term GHG emission reduction goals. In 2016, AB 1550 revised SB 535 requirements, increasing the percent of the State's auction proceeds that must be invested within disadvantaged communities and adding new requirements to direct additional investments to low-income communities and low-income households. AB 1550 requires at least 25 percent of auction proceeds be invested for projects within and benefiting disadvantaged communities; 5 percent for projects within and benefiting low-income communities or benefiting low-income households statewide; and 5 percent for projects within and benefiting low-income communities, or low-income households, that are within ½ mile of a disadvantaged community. These communities are identified by the California Environmental Protection Agency (CalEPA).¹²

In 2017, SB 1 established the TCEA, which will provide approximately \$300 million per year in state funding for projects that more efficiently enhance the movement of goods along corridors that have a high freight volume. Additionally in 2017, SB 132 directed a one-time appropriation of \$50 million dollars to CARB to advance implementation of zero- and near zero-emission warehouses and technology., Further, SB 108 the directed those dollars to be spent through the established AQIP funding process.

Because California's goals for the investment of GGRF monies are consistent with the established objectives of AQIP, and because of the past success of AQIP structure, staff combined the two funding sources (AQIP and Low Carbon Transportation GGRF Investments) into one FY 2017-18 Funding Plan. Staff also included the allocation from the TCEA, per the direction of AB 108.

¹¹ The Cap-and-Trade Auction Proceeds Investment Plan is available at <http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/auctionproceeds.htm>.

¹² The identified Disadvantaged Communities census tracts are available at <http://www.calepa.ca.gov/EnvJustice/GHGInvest/>.

This Solicitation is also supportive of Executive Order B-32-15, which directed the development of the California Sustainable Freight Action Plan.¹³ This action plan was released July 29, 2016, and includes three main targets:

- Zero-Emission Technology Target – Deploy over 100,000 freight vehicles and equipment capable of zero-emission operation and maximize near zero-emission freight vehicles and equipment powered by renewable energy by 2030.
- System Efficiency Target – Improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030.
- Competitiveness and Economic Target – Establish a target(s) for increased State competitiveness and future economic growth within the freight and goods movement industry.

In December 2017, the Board approved the Fiscal Year 2017-18 Funding Plan, which identified projects that both provide immediate emission reductions from the vehicles and/or equipment directly funded and, more importantly, set the stage for greater, indirect reductions in the future by accelerating large-scale market penetration and technology transfer to other sectors. The foundation for the Freight Facilities Project solicitation was established with this plan and will support technology evolution through three phases of technology advancement: demonstration, commercialization, and transition to widespread deployment.

III. NEED FOR EMISSION REDUCTIONS FROM ON FREIGHT ACTIVITIES

The movement of freight within, and through California's regional centers relies predominately on the use of diesel-fueled heavy-duty vehicles and a multitude of equipment types. Freight activity is a large source of GHG, criteria pollutant, and toxic air contaminant emissions. Since these vehicles and equipment types operate at ports, railyards and warehouse districts as part of their normal activities, large amounts of oxides of nitrogen (NOx) and diesel particulate matter (PM) emissions significantly impact nearby communities. Reducing emissions from these activities is not only necessary to meet federally imposed clean air standards but also to reduce adverse health effects from their emissions— especially in disadvantaged communities.

The continued development and demonstration of advanced technologies (zero-emission and near zero-emission) is necessary in order to meet California's long-term GHG emission reduction goals, protect public health, and reach attainment with increasingly more stringent federal air quality standards. Projects selected under this Solicitation to demonstrate advanced technologies should be able to provide a significant reduction in GHG emissions and improve air quality for many affected areas within the State when the technology is fully integrated into the marketplace. Selected

¹³ CARB et al. California Sustainable Freight Action Plan; July 2016; <http://www.casustainablefreight.org/theplan.html>

projects should be a model to other such freight facilities to adopt demonstrated strategies and technologies magnifying the future emission reduction potential of wide scale adoption.

IV. OVERVIEW OF CURRENT VEHICLE AND EQUIPMENT TECHNOLOGIES

There are a variety of advanced, emission-reducing technologies applicable to heavy-duty on-road trucks and off-road equipment that meet the objectives of this Solicitation, ranging from those currently commercially available, to those that have the potential to be expanded into new applications, to those that have surpassed the research and development phase, but have not yet been introduced into the marketplace. Understanding the current status of technologies for this solicitation is important because a technology hierarchy will be used to determine if the vehicle or piece of equipment is eligible for funding. This technology hierarchy is described in more detail in Section IX, Eligible Projects.

In Part II of the FY 17-18 Funding Plan, staff provided updated technology snapshots for a variety of on-road vehicles and off-road equipment.¹⁴ These snapshots were meant as a high level update to the work that was conducted previously for the Technology and Fuels Assessments, which are posted in draft form on the CARB website: <https://www.arb.ca.gov/msprog/tech/report.htm>

These technology assessments included evaluations of the following segments:

- Trucks,
- Transport Refrigeration Units,
- Locomotives,
- Fuels,
- Ocean Going Vessels,
- Commercial Harbor Craft,
- Cargo Handling Equipment, and
- Aviation which includes aircraft and ground support equipment

The technologies highlighted below are also reflective of the eligible project components. Additional eligible project components, such as infrastructure, renewable power generation, and technologies that support emission reductions from ships at berth are covered in Section IX.

A. On-Road Vehicles

1. Trucks

Current on-road heavy-duty diesel emission standards have been in place since 2010 with phased implementation of federal greenhouse gas standards continuing until 2024.

¹⁴ The FY 2017-18 Funding Plan is available at https://www.arb.ca.gov/msprog/aqip/fundplan/1718_draft_funding_plan_workshop_100417.pdf

Battery electric technologies are beginning to be introduced into medium and heavy duty on-road trucks with hybrids and full battery electric offering available. Several models of battery electric trucks are available commercially between 8,001 to 26,000 gross vehicle weight rating (GVWR). Fuel cell powered trucks are not yet commercially available. Several large demonstrations are underway of zero-emission heavy duty trucks involving major truck manufacturers.

2. Transport Refrigeration Units

Cryogenic transport refrigerators, which use liquid nitrogen or liquid carbon dioxide, have been commercially available in Europe for over 18 years; however, they have not caught-on here in the U.S. due to high infrastructure costs. All-electric lithium-ion battery-powered TRUs with solar panel range extender strategies are now in use in small numbers; but incentive funding could accelerate commercialization and help gain acceptance by refrigerated carriers. Electric power plug infrastructure costs are also significant for battery-electric-solar TRUs. All-electric battery-powered TRUs with hydrogen fuel cell range extender are also in the demonstration phase; but again, infrastructure costs are a significant barrier.

B. Off-Road Equipment

1. Cargo Handling Equipment

Cargo handling equipment has already seen a strong push toward zero-emission technology driven both by economic and regulatory goals.¹⁵ For example, there has been appreciable interest in electric yard trucks in freight operations, and commercially available electric yard trucks are funded through programs implemented by CARB and/or other agencies. Technology has not advanced as rapidly in higher tonnage equipment operating at ports and intermodal rail yards, such as reach stackers, top handlers, and high lift-capacity forklifts powered by diesel, for which there is immense potential to significantly reduce GHG and criteria pollutant emissions with zero-emission technologies. CARB, as well as other public entities have been making investments in demonstrations for these types of equipment.

2. Advanced Port Equipment

Cargo handling equipment is an important category to transition to zero-emission, but another technology category that has great potential to reduce GHG emissions and criteria pollutants is equipment that can increase operational efficiencies. This could include zero-emission vessel automated container movement technologies, advanced logistic strategies, and other equipment or strategies that enable more efficient operations. Improving the efficiency and logistics of ports could help reduce GHGs by reducing idling time, right sizing the amount of effort required to perform a specific task, and improving accuracy and scheduling in order to improve the movement of goods through the ports. It should be noted that AB 134 has restrictions for funding fully automated cargo handling equipment, and more details on its impacts on eligibility are described in Section IX.

¹⁵ For more information regarding CARB's regulatory activities for cargo handling equipment, visit <https://www.arb.ca.gov/ports/cargo/cargo.htm>

3. Ground Support Equipment

Similar to cargo handling equipment, airport ground support equipment (GSE) will play a role in future deployment of zero-emission off-road equipment. Zero-emission GSE is readily available and in widespread use in a number of applications, such as belt loaders, baggage tugs, and cargo tractors.

4. Locomotive Technologies and Operations

The baseline for locomotives is the current Tier 4 national emissions standards¹⁶, and they conventionally meet these requirements through the use of diesel-electric configurations. The goal of this funding category is to demonstrate on-board energy systems in order to provide supplemental motive power and reduce fuel consumption and GHG emissions in a locomotive application. Some potential technologies this could include are energy storage solutions, such as batteries, and zero-emission energy generation systems, such as fuel cells, utilizing on-board storage or locomotive tenders.

5. Marine Vessels

The baseline technological level for marine vessels is the current tier-4 national emission standard. Diesel to diesel hybrid technologies are making their way into the marine vessel segment utilizing advanced technologies to use auxiliary engines for vessel propulsion, reducing main engine usage when demand for high horsepower is not needed such as pulling away from dockside, staying on station or other low horsepower operations.

V. AVAILABLE FUNDING

The anticipated total funding available for projects through this Solicitation is up to \$150 million, with up to \$100 million being available from AB 134 and \$50 million from SB 132. If additional funds become available, and valid applications remain unfunded, those projects may be funded without reissuing a solicitation. If additional funding becomes available, the expenditure timeline of those new funds may extend the project end date beyond those listed in this solicitation.

A minimum of \$50 million will be available for projects located at warehouses either as part of a larger application for funding or as a standalone application for funding that is directed solely at warehouse projects. Up to an additional \$100 million in funding that is available under this solicitation and can be directed at warehouses, distribution centers, seaports, freight airports, intermodal rail yards, cold storage warehouses, rail yard, ports of entry, and other freight facilities.

This Solicitation may fund such activities as:

- Construction and deployment of pre-commercial vehicles and equipment with a high potential to be commercialized;

¹⁶ For more information regarding the U.S. EPA's current locomotive standards, visit <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-locomotives>

- Deployment of eligible commercially available vehicles and equipment;
- Production, installation, and supporting infrastructure operations and maintenance;
- Technologies that support ships at berth, including shore power and bonnet systems;
- Demonstration of the deployed vehicle technology and infrastructure;
- Renewable power generation and energy storage that support vehicle, equipment, facility operations and assist in managing energy demand;
- System efficiency upgrades including process improvements such as preferential queuing and operational strategies;
- Data collection and emission testing on vehicles, equipment, infrastructure and facility improvements deployed as part of a proposed project;
- Education and outreach components that highlight the economic benefits of a zero-emission freight facility transformation; and
- Project implementation costs (project implementation costs shall not exceed 5 percent of the project amount funded by CARB).

These activities are further described in Section IX of this solicitation. This solicitation may not fund research or design-only projects. Fully automated cargo handling equipment is not eligible for funding, more information on the automation restriction can be found in section IX. Practical field demonstrations are required for vehicles funded under this Solicitation.

A grantee cap will be applied to the funds available under this solicitation as follows: no single Grantee may be awarded more than \$50 million of the funding for projects under this solicitation. A minimum of \$50 million of available funds will be directed at projects located at warehouses.

VI. REQUIRED MATCHING FUNDS

The Grantee is required to match a minimum of 50 percent of the Total Project Cost. Total Project Cost is equal to the sum of requested grant funding amount and the applicant's proposed match amount. Only applications that meet the minimum match amount will be scored.

Match funding must be provided in the following manner:

- A minimum of 10 percent of the Total Project Cost must be in the form of cash committed by the Grantee, federal and local public agencies, project partners, and/or technology manufacturer (exclusive of providing in-kind contributions). Cash includes labor and capital outlays that occur during the term of the Grant Agreement. Currently budgeted and programmed Federal funds may be considered as cash.
- The remaining portion of the match may be through some combination of in-kind contributions committed by the Grantee, federal and local public agencies,

project partners, and/or technology manufacturer such as equipment, materials, consumables, equipment transportation, private financing, labor and federal or state funds. Public funds committed as part of an in-kind match cannot be sourced from GGRF. If an application proposes to use an award of funding from another state agency as a portion of their in-kind match, the award letter for those funds must be included as part of the application (see Appendix A, Section X).

Project facilities, laboratories, or property will not be considered as part of a proposed in-kind match whether owned or leased by the Grantee or technology manufacturer.

If the project uses assets that have or will be funded in whole or part by other public incentive programs and is still under contractual obligations, its incentive program status must be clearly identified in the project's narrative. Additionally, the project narrative must include a plan to ensure that emission reductions required by any incentive program's contract or grant are considered and accounted for (see Appendix A, Attachment 2).

The applicant may propose to use in-kind matching funds for administrative activities, if selected for funding, to be performed after the issuance of a preliminary award of funding and before the execution of the project's grant agreement. Such activities may include completing California Environmental Quality Act (CEQA) requirements, entering into sub-agreements with technology manufactures and end-users, and performing other administrative activities required by the prospective grantee, to enter into the grant agreement. However, an applicant does this at its own risk and with no guarantee that a grant agreement will be executed. CARB will not reimburse the prospective grantee for any costs incurred before the grant agreement is executed.

If a third-party, (i.e., a party other than the Grantee or technology manufacturer) proposes to provide any part of the required match, the Grantee must include a letter from each third-party stating that it is committed to providing a specific dollar value and the source of those funds. Match letters from third-party participants must be signed by someone who has the authority to commit those funds and will be considered binding on the applicant. Letters that do not have specific dollar amounts may not be considered.

Match contributions letters from public agencies that require approval from their governing board but do not have such approval at the time of application is submitted must be clearly documented in the match letter. CARB will consider such contributions as pending in the application review and, for applications selected for a preliminary award, Grantees will be required to show governing board approval of all proposed match funding before grant execution. Match letters that do not meet these Match Letter Requirements may not be considered.

A Grantee and its partners must demonstrate technical and fiscal resources sufficient to meet their cost share commitment and complete the proposed project.

VII. ELIGIBLE GRANTEES

This competitive Solicitation is open to local air districts, other California-based public entities, or California-based non-profit organizations as the Grantee (applicant). The Grantee must demonstrate its expertise at implementing large scale advanced technology deployment projects and providing sufficient administration and oversight. Private sector parties (i.e., technology manufacturers and end-users) interested in securing funding for a technology or strategy, must partner with an eligible Grantee submitting a project proposal. Only projects from eligible Grantees will be scored.

Eligible applicants must meet all applicable requirements of State law and regulations, AQIP Guidelines, FY 2017-18 Funding Plan, and this Solicitation. Specific requirements for the Grantee are further described in this Solicitation. To be considered for the grant award, applicants must fully complete the Application (Appendix A) and demonstrate that they meet the application requirements (see Section XII of this Solicitation). CARB may request clarification regarding application responses during the application review process. Responses to clarifying questions will not be considered for scoring, but will become part of the application and therefore the grant agreement if a proposal is selected for funding.

An eligible Grantee can request Zero- and Near-Zero Emission Freight Facility project funds without an identified technology manufacturer(s), provided they commit in the application to solicit for the project partners once funds are secured from CARB via this competitive Solicitation process. However, projects that already have all the needed participants, such as the identified end users of the proposed vehicles or equipment, technology manufacturer(s), data collection and analysis provider, eligible Community Based Organizations (CBOs), and eligible Grantee, will score higher than those that do not have team members identified in advance (see Criteria 2 in Section XV, Evaluation, Scoring, and Preliminary Selection).

The Grantee will be required to submit a resolution of its governing board prior to execution of the Grant Agreement that commits the agency/organization to:

- Comply with the requirements of this solicitation;
- Accept the Grant funds from CARB; and
- Allocate any funding that the Grantee has committed to be part of a project application.

It is recommended that the resolution allow for grant amendments without governing board approval, if possible. If the public agency or non-profit organization does not have a governing board, then a binding written commitment from an official of the agency that has authority to enter into contractual obligations will be required to fulfill the above commitments.

If the public agency or non-profit organization that is submitting the application contributes a match to the project, the governing board resolution shall authorize the agency's or organization's legally authorized official to supply sufficient funding to meet the stated match commitment. Signed Grant Agreements and approved governing board resolutions need to be in place on or before the deadline listed in the Solicitation Timeline in Section XIII. Sub-agreements between the technology manufacturer(s) and the Grantee need to be in place before non-administrative work can begin.

VIII. RESPONSIBILITIES OF GRANTEE, TECHNOLOGY MANUFACTURER AND DATA COLLECTOR

The Grantee will be responsible for administration of the demonstration project, and major responsibilities will include:

- Develop project team including, technology manufacturer, end-users and data collection and analysis provider;
- Submit of demonstration project proposal (application) to CARB;
- Administer the project;
- Coordination of press releases and press events;
- Ensure completion of required CEQA documents;
- Oversee technology manufacturer(s) if applicable;
- Oversee project budget, completion of milestones, and verify receipt of deliverables and the amount of funds being used for the project's match requirement;
- Report to CARB on project status, Grant performance, and match expenditure;
- Submit periodic reports and Grant disbursement requests to CARB;
- Ensure purchase, installation, and maintenance of data logging or other data collection equipment as required;
- Submit data, as requested by CARB; and
- Coordinate periodic project status update meetings.

The technology manufacturer's major responsibilities in (if applicable) the project will include:

- Teaming with an air district, other public agency, or non-profit organization to develop the demonstration project application;
- Providing the technical expertise in performance of the demonstration;
- Timely achievement of stated project goals; and
- On-time reporting to the Grantee on project status and Grant performance.

The data collection and analysis provider's major responsibilities in a proposed project will include:

- Installation and maintenance of data collection equipment on advanced technology and baseline vehicles, equipment and facilities;

- Coordination with CARB, Grantee, and other project partners on data to be collected; and
- Collection, analysis and reporting of collected data.

Progress reports will be submitted from all project partners to the Grantee at a minimum of three-month intervals. The Grantee is responsible for forwarding all progress reports, unaltered, to CARB within seven business days of receipt (see Reporting and Monitoring Requirements in Section XVII, Implementation Process). Additionally, every Grant disbursement request shall be accompanied by a progress report, in addition to any other required reports, that documents the time interval, expenditure of match funds and the completion of specific project milestones, including any specific deliverables as defined for that milestone (see Project Funding Procedure in Section XVII, Implementation Process).

In order to ensure consistent data analysis across all CARB funded projects, specific data elements will be required to be collected and required formats are listed in Appendix F, Data Collection Requirements.

Data collection will be required throughout the project, and the data gathered will be required to be submitted to CARB periodically and as part of project milestones and periodic project update reports. The Grantee must coordinate installation of data logging or other equipment to facilitate data collection. The type of data to be collected includes, but is not limited to, fuel/electricity consumption and cost, fueling/charging times, state of charge information for battery and fuel cell electric vehicles and equipment, odometer readings, scheduled and unscheduled maintenance information, relevant telematics and GPS data, operating costs, hours of operation, vehicle and equipment idle times, temperatures, facility efficiency improvement metrics, and end user experience. Data collection and emission testing will also be required for baseline vehicles and equipment where non-zero-emission vehicles and equipment is being deployed as part of the project. The applicant should suggest a minimum number of baseline vehicles and equipment that will be outfitted with data collection equipment in their submittal. The Grantee will ensure that the data collection and analysis provider will have access to representative baseline vehicles and equipment with comparable duty-cycles. Emission testing protocols will be approved by CARB, at its sole discretion. For more details, please see Appendix F, Data Collection Requirements.

A final report must be submitted to CARB by the Grantee at the conclusion of the project. The project will not be complete until the final report has been accepted by CARB. The final report will include, but will not be limited to: a summary of the progress reports, any deliverables that were committed to in the project, the results from any emission testing performed, and any other information required by CARB. The Draft final report is due to CARB no later than March 15, 2021 and the final report to CARB no later than April 15, 2021 (see Sample Grant Agreement, Appendix B). CARB retains the right to withhold up to 10 percent of the total award amount until delivery of the final report.

Additional reporting requirements are detailed in the Reporting and Monitoring Requirements section of this Solicitation.

IX. ELIGIBLE PROJECTS

A. Overview

CARB's goal under the Zero-and Near-Zero Emission Freight Facility Project solicitation is to support bold, transformative emission reduction strategies that can be emulated throughout freight facilities statewide. Elements of an eligible project can include but is not limited to on-road vehicles, equipment, supporting infrastructure, energy generation and storage, facilities improvements, system efficiency upgrades and strategies and education and outreach.

The project will fund a variety of technologies and strategies designed to:

- Provide direct GHG, criteria, and toxic pollutant emission reductions from freight facilities.
- Synergistically demonstrate the practicality and economic viability of deploying system and energy efficiencies alongside multiple zero- and near zero-emission vehicles and equipment along with necessary infrastructure.
- Demonstrate the potential for widespread commercial acceptance of the various types of zero- and near zero-emission vehicles and equipment used in freight facilities and associated on-road freight applications.
- Accelerate commercialization of zero- and near zero-emission goods movement technologies.

B. Eligible Facilities

Eligible project locations are freight facilities located in California such as warehouses, distribution centers, seaports, freight airports, intermodal rail yards, cold storage warehouses, rail yard, ports of entry, and other freight facilities.

C. Eligible Technologies

Eligible projects can include all of the vehicle and equipment technologies that were discussed in Section IV. This includes technologies that are not commercially available and still in the development phase but will be commercially available at least three years after the end of the project and technologies that are currently commercially available. A technological hierarchy will be applied as follows:

- Zero-emission technologies are eligible for funding in all vehicle and/or equipment types.
- Zero-emission enabling technologies are eligible for funding where full zero-emission vehicles and equipment are not commercially available by major manufacturers.

- Use of Low NOx engines will be eligible for funding where fully zero-emission or zero-emission enabling technologies are not commercially available.

The current state of advanced technology in any one vocation or duty cycle will be considered the baseline for funding eligibility. If a technology is proposed that does not fit into this technological hierarchy, staff retains the discretion to not include it as part of the project.

Below are some practical examples of this technological hierarchy:

- Yard Trucks - Zero-emission battery-electric yard trucks are offered for sale by major manufacturers. Therefore, the only eligible technology for use in yard trucks is zero-emission. If a proposed project elects to include in their application a proposal for yard trucks using internal combustion engine technology a compelling case must be made in the Project Narrative why zero-emission technologies are not feasible in the intended application.
- Locomotives - The current state of locomotive technology is US EPA tier-4 emission levels. Engines that meet that tier and also reduce GHGs would be eligible for funding.

Regardless of the technological hierarchy, any proposed technology for use in vehicles or pieces of equipment must get GHG emission reductions. GHG emission reductions cannot come solely from the use of low carbon fuels.

Elements of an eligible project application could include, but are not limited to:

On-road vehicles and off-road equipment that enter and exit the facility, including, but not limited to: Zero-emission or zero-emission capable yard trucks, on-road delivery trucks, transport refrigeration units, drayage trucks, and locomotives. Technology options include battery electric, fuel cell electric, and hybrid technologies used in trucks that operate as zero-emission at all times, or are able to operate in zero-emission only mode. In areas where zero-emission or zero-emission capable technology is not available, hybrid systems and low NOx engines may be included.

Off-road equipment that works on-site, including, but not limited to: zero-emission or zero-emission capable switch locomotives and full size locomotives, zero-emission cargo handling equipment, rubber tired gantry cranes, yard trucks, ground support equipment, forklifts, tugboats, etc. Technology options include battery electric, fuel cell electric, and hybrid technologies that operate as zero-emission at all times or are able to operate in zero-emission only mode. In areas where zero-emission or zero-emission capable technology is not available, hybrid systems and low NOx engines may be included.

It should be noted that fully automated cargo handling equipment is not eligible for funding or for use as a match, per AB 134. This legislation defines fully automated as 'equipment that is remotely operated or remotely monitored with or without the exercise of human intervention or control'. For the purpose of this solicitation "cargo handling

equipment” means any off-road, self-propelled vehicle or equipment used at a port or intermodal rail yard to lift or move container, bulk, or liquid cargo carried by ship, train, or another vehicle, or used to perform maintenance and repair activities that are routinely scheduled or that are due to predictable process upsets. Equipment includes, but is not limited to, rubber-tired gantry cranes, yard trucks, top handlers, side handlers, reach stackers, forklifts, loaders, aerial lifts, excavators, and dozers.¹⁷

For the purpose of this solicitation, fully automated equipment means that the equipment is not directly human operated, and this includes off-site human control. Human operators must either be on the piece of equipment or tethered to the piece of equipment, and must control the equipment’s function within approximately 100 feet of the piece of equipment that is being operated. Tethering can be wired or wireless. The vehicle or equipment operator must be within approximately 100 feet of the piece of equipment, with clear line of sight that is the primary means of equipment control and operation. Remote control locomotives (RCLs) are an example of tethering, and commonly used with switch locomotives in some railyards, where the operator walks alongside the locomotive controlling it through a tethered control. Equipment that has automated activities, such as predictive cruise control or crane positioning, are not considered fully automated. However, the automation restriction does not apply to recharging or refueling protocols or data collection efforts. Fully automated equipment will not be able to be counted as eligible match funding as described in Section IV, Required Match Funds.

D. Other Eligible Project Components

In order to facilitate bold transformations to zero- and near zero-emission freight facilities, other technologies and strategies are included in this solicitation. For example, infrastructure to support advanced technology vehicles and equipment is an important component. Charging infrastructure for many vehicles and equipment applications is not yet standardized, making interoperability between different manufactures challenging. Charging and refueling infrastructure (e.g. hydrogen refueling station) is an eligible expense for projects funded under this Solicitation, and their use with advanced technology vehicles and equipment should help further the infrastructure standardization efforts to facilitate ubiquitous heavy-duty vehicle and equipment charging.

Another important component could include renewable power generation and energy storage, which is also an eligible funding category under this solicitation. Conventional freight facilities are just now beginning to incorporate such systems in their facilities to reduce electrical consumption, help to balance electrical loads and to mitigate demand charges from utilities.

¹⁷ Cargo Handling Equipment is defined per the Cargo Handling regulation, which can be found on the following webpage:
<https://www.arb.ca.gov/ports/cargo/cargo.htm>

Other project components can include:

- Technologies that support ships at berth, including shore power and bonnet systems;
- Fueling infrastructure to support project vehicles and equipment, including, but not limited to, hydrogen fueling infrastructure and charging infrastructure;
- Renewable power generation and energy storage systems to support vehicle and equipment fuel generation and freight facility operations, and manage energy demand;
- System efficiency upgrades, including process improvements such as preferential queuing and operational strategies; and
- Education and outreach components that highlight measureable environmental and economic benefits of a zero-emission freight facility transformation.

In addition, the Zero-and Near Zero-Emission Facilities Project would allow as match, other project elements that are compatible with the intent of this project. These include, but are not limited to:

- Energy efficiency upgrades to heating, cooling and ventilation systems, lighting, cold storage facilities, etc.;
- Grid improvements necessary to support the increased use of electricity.
- Facility improvements to support infrastructure, system efficiency, and energy efficiency upgrades;
- Workforce training and development; and
- Employee mobility enhancements that reduce GHG and criteria pollutant emissions through ride sharing, bike sharing, vanpools or shuttle services, and charging stations for electric vehicles.

E. Disadvantaged Community Component

The eligible projects that can be funded by this Solicitation are required to achieve significant reductions in GHG, criteria pollutant, and toxic air contaminant emissions compared to conventional technologies and provide benefits to disadvantaged communities. Projects will not be required to be located in disadvantaged communities to be eligible for funding but is highly encouraged. Benefits to disadvantaged communities will be considered during the scoring process and those applications that show a benefit to a disadvantaged community will score better than those applications that do not.

To determine whether a project qualifies as being located in a disadvantaged community, applicants must use the criteria in CARB's SB 1550 Guidance.¹⁸ To determine whether a project qualifies as benefiting disadvantage communities,

¹⁸ The latest guidance on AB 1550 requirements can be found here: <https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/fundingguidelines.htm>

applicants must use SB 535 Guidance.¹⁹ Specifically, how the different facets of the proposed project will be located in a disadvantaged community or vehicles and equipment funded will be domiciled, registered or used a majority of the time in a disadvantaged community. Applicants are required to make an affirmation in their application Project Narrative (Appendix A, Attachment 3) as to how the proposed project meets the criteria for being located in a disadvantaged community and the reason that criteria has been satisfied, including any site- or route-specific information used to make that determination.

Fueling and charging infrastructure to facilitate the successful demonstration of vehicle and equipment technologies and logistics/operations efficiency improvements may also be included as an eligible expense.

Technologies that by themselves do not provide a GHG benefit, but solely rely on the use of renewable fuel for their GHG emission reductions will not be considered an eligible project under this solicitation.

X. SCOPE OF WORK

This section provides information on required elements for the project's scope of work. The requirements identified below are minimum requirements and are not comprehensive. In addition to the information below, the scope of work must include reporting and monitoring requirements as detailed in the Reporting and Monitoring Requirements section of this Solicitation.

Applications for funding can combine multiple vehicle and equipment types as well as facility improvements and ship-at-berth emission reducing technologies. There is no limit to the number of technologies or strategies that can be funded under this solicitation, as long as the requests for funds does not exceed the \$50 million cap, as described in section V. Practical field demonstrations are required for any pre-commercial technologies funded under this Solicitation. Field demonstrations must be done while the vehicle or piece of equipment is in revenue service in its intended vocation by the end-user partner included in the project application. Field demonstrations of pre-commercial technologies should provide enough data to determine the economic viability for the continued use of the advanced technologies and must collect the relevant data items that are identified in Appendix F. Projects with longer field demonstration will score higher than those that only meet the minimum deployment timeline. Field demonstrations of proposed technologies must be at least one year in aggregate for the project with any one vehicle, piece of equipment, or facility improvement having at least three months of data collection while in operation in their intended service. The application should discuss the disposition of all funded vehicles and equipment at the end of the proposed project. Projects that indicate they will continue the use of funded assets in their normal business practices after the term of

¹⁹ The original guidance on SB 535 requirements can be found here: <https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/arb-funding-guidelines-for-ca-climate-investments.pdf>

the project could score higher than those that do not indicate the disposition of funded assets. All on-road trucks funded under this solicitation will be required to install data collection equipment that can track the truck in real time and provide data on the position of the truck, including when it is in operation in a disadvantaged community, as well as collect data on vehicle operation.

Applications that have elements of their proposals for pre-commercial demonstrations must show a strong ability to be deployed widely into the marketplace within 3 years of the conclusion of the project, therefore 2024.

Projects that contain zero-emission trucks must meet the minimum range requirement of at least 150 miles per day. Charging and fueling infrastructure can be an eligible component of an application for this category and needs to meet the infrastructure CEQA requirements as described in Appendix E. No emission reductions associated with infrastructure can be claimed.

Funded projects will be expected to be made available for tours by government officials, competing freight facility operators, members of the public and other interested stakeholders to highlight firsthand the benefits of any funded project and the anticipated cost savings from employing such technologies and strategies.

A. Data Collection and Analysis and Emissions Testing

Data collection and analysis will be a required element of all funded projects and will be accomplished by an identified member of the proposed project team with experience in collecting and analyzing data from large and complex projects. All types of data to be collected will be determined at CARB's sole discretion, as outlined in Appendix F or as modified by CARB at its sole discretion, in consultation with the project's technology manufacturer(s), end-users, data collection and analysis provider and Grantee. All project team participants must work cooperatively with the data analysis provider and supply data as requested in a timely manner. The sharing of data collected from vehicles and equipment, funded infrastructure and facility improvements, and other relevant equipment with the project team and CARB is required.

Reproducible emission testing for internal combustion engines to verify the emission benefits from the demonstration of technologies funded under this Solicitation is required. NO_x emissions will be shown as NO_x and nitric oxide (NO) plus nitrogen dioxide (NO₂). The emission testing procedure must be cited in the project's narrative (see Appendix A, Attachment 2). The final emission testing procedure will be subject to CARB approval.

Data collected from emission or durability testing as part of a selected project and included in the project's submitted work plan and scope of work can be applied toward CARB or United States Environmental Protection Agency (U.S. EPA) certification or verification. However, funding cannot be used directly to fund formal CARB or U.S. EPA verification or certification processes.

B. Vehicle Certification, Verification, and Permitting

All vehicles in the proposed project that will be operated on California roadways must be compliant with all State requirements, such as, but not limited to, CARB Experimental Vehicle Permitting, Department of Motor Vehicles licensing, California Highway Patrol requirements, and others. Further, the proposed on-road vehicles must be approved for use by truck operators that will be using them in the demonstration, and confirmation must be indicated in their letter of support for the project. A clear explanation of what steps are required in the process for legal operations on California roadways, usage on port properties, rail yards, and other sites where the on-road vehicle will be operated, should be indicated.

As part of a viable commercialization plan, CARB verification or certification must be a goal for all pre-commercial vehicles, pieces of equipment or engines funded under this Solicitation. For any technology that will require CARB verification or certification or U.S. EPA certification or consideration, the applicant must explain in the project narrative the steps that will be followed to accomplish required certification and verification protocols. All submittals of certification documents to U.S. EPA must concurrently be submitted to CARB.

C. Vehicle Conversions

Projects containing a vehicle conversion component will be required to meet certain criteria. A conversion means removing the existing internal combustion engine and replacing it with a zero-emission drive system, or a near zero-emission system utilizing an electric drive system with an internal combustion engine as a range extender, or removing the existing internal combustion engine and replacing it with an advanced low NOx engine. The following criteria apply to conversions:

- A vehicle converted to a partial zero-emission system must achieve zero-emission miles while at a port, rail yard, intermodal facility, distribution center, or warehouse, or while transiting disadvantaged communities. A piece of equipment converted to a partial zero-emission system must reduce GHG emissions when compared to conventional diesel fueled counterparts. The determination when a vehicle or piece of equipment is operated in zero-emission mode must be made automatically without input from the vehicle operator.
- Conversions of existing vehicles are limited to vehicles that the applicant can demonstrate will have a remaining useful life of at least 10 years. Conversions of pieces of equipment must be demonstrated to have sufficient useful life remaining to complete the term of the proposed project.

D. Infrastructure

Infrastructure necessary for operating vehicles that are the subject of this Solicitation is an eligible cost. Proposed infrastructure should be capable of allowing a robust and significant field demonstration of the proposed technology. In-route charging, yard charging, and refueling infrastructure may be part of an eligible application; however, the infrastructure must be coupled with the demonstrated vehicles and be sized appropriately. Projects that propose only infrastructure without accompanying vehicles will not be scored.

Emission reductions resulting from vehicle or equipment recharging or refueling infrastructure funded by this Solicitation are not allowed to be included as part of the emission reduction benefits of the project.

Proposed infrastructure costs must be substantiated by qualified entities with experience in the installation, permitting, and commission of the proposed infrastructure type. Any infrastructure proposal should indicate all the required steps, including, but not limited to, siting, permitting, safety certifications, and other necessary certifications. Operation and maintenance of any proposed infrastructure must be addressed in the project application budget. The amount of funds proposed in the application for infrastructure that will be funded by the grant will be the total amount of funds that CARB will devote to infrastructure funding. **NOTE: If the actual infrastructure costs exceed the proposed amount of funds allocated in the application, the difference must be covered by the applicant or another party.**

Projects that propose a dual use (public and private) charging/refueling station are encouraged and may be scored higher.

a. Hydrogen Refueling Stations

Proposals containing a hydrogen refueling station installation must adhere to the minimum technical requirements and renewable hydrogen requirements specified in Appendix C and the CEQA and permitting requirements described in Appendix E. Additionally, the project must comply with all applicable federal, state, and local laws and requirements for acceptable installation and usage of hydrogen refueling stations. Each hydrogen refueling station must be designed to allow the station to accept delivery of hydrogen fuel from a mobile refueler or hydrogen tube trailer if on-site hydrogen production goes off-line or if hydrogen delivered via a pipeline is disrupted. Public or private access to refueling from proposed refueling stations is not required. However, infrastructure proposals that allow refueling to non-project entities during or following the completion of the demonstration project may score higher than those that do not allow refueling to non-project entities.

b. Electric Vehicle Supply Equipment

Proposals containing electric vehicle or equipment charging infrastructure installation must adhere to the CEQA and permitting requirements described in Appendix E, and the project must comply with all applicable federal, state, and local laws and requirements for acceptable installation and usage of electrical vehicle supply equipment (EVSE). The proposal must include a maintenance plan for continued reliable operation and unforeseen breakdowns of the EVSE. Public access to charging from proposed EVSE is not required. However, projects that allow public charging to non-project entities during or following the completion of the demonstration project may score higher than those that do not allow charging to non-project entities.

XI. PROPRIETARY INFORMATION AND INTELLECTUAL PROPERTY

CARB will not make any claims as to ownership of any vehicles or equipment funded by this grant. However, all information and data generated under the Grant Agreement is the property of CARB. Additionally, the technology manufacturer(s), end-users, data collection and analysis provider and Grantee will make available any information and data needed to satisfy the requirements discussed in the Reporting and Monitoring Requirements section of this Solicitation.

Data gathered on actual emissions to the air as part of this demonstration project cannot be protected from disclosure. Any information determined to be a trade secret or otherwise exempt from disclosure under the California's Public Records Act or other provisions of law must be labeled "confidential." Review Appendix A, Attachment 6 for Procedures for Handling Confidential Information. If you wish to include confidential information, you must:

- Complete the Confidentiality Provision (Appendix A, Attachment 6) and attach it to your project proposal;
- Separate confidential pages from the other elements of the project proposal (do not include any confidential information in the main project proposal); and
- Clearly label every confidential page as "CONFIDENTIAL".

Project proposals will be reviewed by CARB staff and may include reviewers outside of CARB associated with public universities in California and other State government agencies as needed. In the project proposal, at the point where the information would appear if it were not confidential, please indicate its existence under the separate cover. Please provide the name, address, and telephone number of the individual to be contacted if CARB receives a request for disclosure of the information claimed as confidential. CARB may share confidential information related to a project (such as certification/verification data) with multiple units and sections within CARB or other relevant State agencies.

XII. APPLICATION REQUIREMENTS

Eligible Grantees must meet all applicable requirements of State law and regulations, AQIP Guidelines, Funding Plan, and this Solicitation. To be considered for the grant award, Grantees must complete the application and demonstrate that they meet the required Solicitation elements. CARB may request clarification regarding application responses during the application review process. Clarifying questions will not be considered changes to the application for the purpose of scoring, but will be considered part of the project application and will be included in the grant agreement if the project is selected for funding. Only applications that contain all of the required elements as described in the Required Application Elements section and Appendix A of this Solicitation will be scored.

Please enclose with your project proposal any documents (or pertinent excerpts) that you cite in support of performance claims in your project. However, do not include materials that are not needed to supply the information requested in these instructions. CARB will not review patent documents, engineering drawings and specifications, or promotional materials. Include in your application package letters of commitment from project partners that describe the nature of their contribution to the project.

The submitted application package must include four (4) copies in addition to the signed original and one (1) compact disc (CD). The CD must contain the application package, including all required documents, as a single electronic file in either Microsoft Word or Portable Document Format (PDF). Applications that do not meet the above requirements may not be scored and may be disqualified.

Letters of support from non-project partners are discouraged and are not part of the scoring criteria. However, letters of commitment from local Community Based Organizations (CBOs) that are part of the project team are required. Local CBOs that are part of the project team should detail their support for the project and what role the community group will play in the project. Further, letters should indicate the level of support the project has in the disadvantaged community(ies) where the project is located and indicate the group's role in the community. Strong support from eligible community groups may be eligible for extra points under the Optional Extra Credit Scoring Criteria 12, described in Section XV Evaluation, Scoring and Preliminary Selection section.

CARB requires applications to be accurate, and applicants are strongly encouraged to ensure their applications are brief and clear. If a project is selected for funding, the application will be the basis for the development of the grant agreement and will be incorporated as part of the grant agreement. Applications will be considered a promise to perform actions in a specific project and are not considered a starting place to begin negotiations on the project's final scope of work. Applications will be initially screened for completeness; incomplete applications will not be scored. The application is included as Appendix A of this Solicitation and includes the following required elements:

Appendix A: AQIP Application (Application must be signed and dated)

- Attachment 1: Project Executive Summary and Project Summary for Public Posting
- Attachment 2: Project Narrative and Work Plan
- Attachment 3: Emission Reduction and Cost-Effectiveness Calculations
- Attachment 4: Proposed Budget and Project Milestone and Disbursement Schedule
- Attachment 5: Disadvantaged Communities Eligibility Determination
- Attachment 6: Procedures for Handling Confidential Information
- Attachment 7: Letters of Commitment
- Attachment 8: California Environmental Quality Act Worksheet (if applicable)
- Attachment 9: Conflict of Interest Declaration
- Attachment 10: STD. 204 Payee Data Record (**required even if applicant is a public entity**)
- Attachment 11: Applicant Qualifications

XIII. APPLICATION INSTRUCTIONS

Appendix A contains the forms and information necessary for submittal of a complete application. CARB will select a Grantee based upon the scoring criteria identified in this Solicitation. All information and data submitted as a response to this Solicitation are the property of CARB and will become a public record. If no qualified proposal is submitted, CARB will not award a grant and will re-evaluate this Solicitation to re-solicit for project proposals or other options at CARB's sole discretion.

If you need this document in an alternate format or language, please contact Earl Landberg at (916) 323-1384 or earl.landberg@arb.ca.gov. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

One (1) signed original, four (4) copies, and one (1) CD of the application, including all of the required documents, must be received at the Air Resources Board headquarters at 1001 I Street, Sacramento, California 95814. The CD must contain the application and other required documents, all in a single Word or PDF file.

Applications submitted via U.S. Postal Service, United Parcel Service (UPS), Express Mail, Federal Express, or another delivery service provider must be dispatched with enough time so that they are received by CARB no later than **5:00 p.m. (Pacific Time)**

on July 19, 2018 (delivery service provider tracking number may be used to verify date of receipt). Applications received after July 19, 2018 may be rejected and not scored.

Applications submitted via the United States Postal Service must be mailed to the following address:

Earl Landberg
 California Air Resources Board
 Mobile Source Control Division – Mailstop 5B
 P.O. Box 2815
 Sacramento, California 95812-2815

Applications submitted via another delivery service or in person may be delivered to the following address:

Earl Landberg
 California Air Resources Board
 Mobile Source Control Division – Mailstop 5B
 1001 I Street
 Sacramento, California 95814

Once the application has been mailed or delivered in person, please send an email to Earl Landberg at earl.landberg@arb.ca.gov indicating that you have submitted an application. Sending this email secures one of the five points provided for the Application Completeness scoring criteria and lets CARB staff know that your formal application is on the way. CARB will send a confirmation email within 24 hours to the applicant once the hard-copy of the application has been received. **No applications may be submitted by fax or email.**

Solicitation Timeline*

Key Actions	Dates	Time (Pacific)
Public Release of Solicitation	March 21, 2018	--
Applicant Question Deadline	April 20, 2018	5:00 pm
Applicant Teleconference	April 24, 2018	10:00 am
Application Submittal Deadline	July 19, 2018	5:00 pm
Preliminary Grantee Selection	September 6, 2018	5:00 pm
Final CEQA Documentation Submittal Deadline**	November 1, 2018	5:00 pm
Execute Grant Agreement and Return to CARB***	November 16, 2018	5:00 pm
Sub-Agreement Process Complete	December 31, 2018	5:00 pm

* Timelines are subject to change at CARB's sole discretion.

**This step only applies for projects containing infrastructure proposals where an agency other than CARB is the lead CEQA agency for the project.

***Includes governing board resolution.

XIV. APPLICANT TELECONFERENCE

CARB will hold an Applicant Teleconference at which time staff will be available to answer questions potential applicants may have regarding eligibility, application completion, and other requirements. The Applicant Teleconference will take place on the following date and time:

Date: April 24, 2018

Time: 10:00 a.m. – 12:00 p.m. (Pacific Time)

Place: Cal/EPA Headquarters, Conference Room 2410
1001 I Street, Sacramento, California 95814

Teleconference Information:

Domestic Call-in Phone Number: 800-593-9924

International Call-in Number: 1-312-470-0065

Passcode: 8206640

The Applicant Teleconference will be open to all interested entities. The intent of the Applicant Teleconference is to provide potential project applicants with an opportunity to ask clarifying questions regarding the Solicitation package and project requirements. Written questions submitted before the Applicant Teleconference will be given priority. Questions may be emailed to Earl Landberg at earl.landberg@arb.ca.gov. Questions may be submitted up to 5:00 p.m. (Pacific Time) two business days prior to the Applicant Teleconference. The questions and answers from the Applicant Teleconference and any questions received via email will be posted on the CARB website no later than **5:00 p.m. (Pacific Time) on May 22, 2018**; this date may be extended at CARB's sole discretion. CARB will not answer questions regarding this Solicitation after the Applicant Teleconference. Any verbal communication with a CARB employee concerning this Solicitation is not binding on the State and shall in no way alter a specification, term, or condition of the Solicitation.

XV. EVALUATION, SCORING, AND PRELIMINARY SELECTION

CARB will evaluate all eligible project applications based on the same scoring criteria described below. The maximum score is 120 points. The qualified applicant(s) with the highest overall score(s) will be preliminarily selected as Grantee(s).

The preliminary selection of a project does not in any way commit CARB to approving the grant. The selected applicant will be required to sign a Grant Agreement with CARB to fulfill the duties of Grantee (see Appendix B). The Grant Agreement may not be executed unless and until any required CEQA review has been completed. For a project where an agency other than CARB is serving as lead CEQA agency, the applicant must submit any required final CEQA documents by November 17, 2018 (prior to execution of the Grant Agreement). If an applicant fails to meet this requirement, CARB may deny the grant application. CARB will independently review any CEQA documentation provided by the applicant. CARB may modify any Grant Agreement based upon information produced from the CEQA environmental review process. If

CARB in its sole discretion finds a project's CEQA documentation inadequate, CARB retains absolute sole discretion to either (1) modify the grant agreement as necessary to comply with CEQA, (2) select other feasible alternatives to avoid significant environmental impacts, or (3) deny the grant application. No legal obligations will exist unless and until the parties have executed and delivered a Grant Agreement, as informed by information produced from the CEQA environmental review process (to the extent applicable).

CARB, in its sole discretion, may cancel the proposed grant and make a selection to the next highest scoring project, and so on, until an agreement is reached, or exercise its right, in its sole discretion, throughout this process to not award a grant. CARB reserves the right, in its sole discretion, to cancel this Solicitation, re-solicit for a Grantee, or direct funding to another project in the Funding Plan. In the event funding has been awarded to the highest scoring project(s), and the remaining available funds are less than the amount requested in the next highest scoring application, ARB, in its sole discretion, may offer funding to the next highest scoring project(s), may fund a portion of the next highest scoring project(s), or carry the remaining funds forward to the next fiscal year, shift the funds to another project category, or not award a grant.

CARB retains the right to remove discrete elements of projects selected for funding that CARB determines to be ineligible or to reduce the scope of a proposed project to use any remaining funds. In the event that one or more projects cannot be fully funded because the requested amount exceeds the available remaining funds, CARB in its sole discretion may offer to fund those projects at a lesser amount at a scaled down scope. If the project applicant declined funding at the reduced project scope, CARB may offer funding to the next highest scoring eligible application, either fully or at a scaled down scope, carry the remaining funds forward to the next fiscal year, shift funds to another project category, or not award a grant(s). As such, applicants are encouraged to include language in their Project Narrative that allows for scaling of the project both larger and smaller than initially proposed to facilitate negotiations with CARB if there are remaining funds or if additional funds become available.

It is anticipated that up to \$150 million for all selected projects will be available under this Solicitation. If additional funds become available, and valid applications remain unfunded or if a funded application can be expanded beyond the original scope outlined in their application, those projects may be funded without reissuing a Solicitation at CARB's sole discretion. If additional funds are made available for remaining applications the expenditure timeline of those funds may be used to extend a project beyond the project end date described in this solicitation.

If two or more applications are submitted for the same project by different applicants, those applications will be scored separately, and the highest scoring project will then compete against applications submitted for different projects.

Proposed projects can contain both warehouse and other freight facilities as part of a single application and the total sum of dollars spent on the warehouse components of

projects must be \$50 million. Higher scoring freight facility projects without a warehouse component may not be awarded funds if the minimum allocation for warehouse projects is not fulfilled by awarding funds to projects that contain a warehouse element even if they have not scored as high as other non-warehouse containing applications.

Other elements are also required to be included in each application as indicated in this Solicitation (see the Required Application Elements area of this section). Location of projects in disadvantaged communities will be part of the allocation scoring process and is not a requirement to be eligible for funding. Information on determining if a proposed project is located within a disadvantaged communities can be found in Appendix A, Attachment 5.

Applications that already have sub-agreements in place with all the proposed project partners will be eligible for extra credit points, see scoring criteria 12 in this section.

A. Summary of Scoring Criteria for Demonstration Projects

	Scoring Criteria	Points
1	Applicant Qualifications	5
2	Project Team Capabilities and Degree of Industry Collaboration	10
3	Project Objectives and Work Plan	15
4	Budget, Match Funding, and Financial Capabilities	10
5	Potential Emission Reduction Benefits	5
6	Cost-Effectiveness	5
7	Disadvantage Community Benefit	15
8	Technology and Innovation	10
9	Potential for Market Penetration and Commercialization of the Technology	15
10	Potential of Project to Act as a Showcase of Technology	15
10	Application Completeness	5
11	Timeline for Project Completion	5
12	Optional Extra Credit Scoring Criteria	5
	TOTAL	120

Applicants will be evaluated based on the Scoring Criteria. The Project Narrative and Work Plan must address how the applicant will implement all of the tasks in the proposed scope of work.

B. Scoring Scale

Using the scoring scale below, the evaluation team will score each eligible application for each scoring criteria described within this Solicitation.

Possible Points	Interpretation	Explanation for Percentage Points
0%	Not Responsive	Response does not include or fails to address the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
10-30%	Minimally Responsive	Response minimally addresses the requirements being scored. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
40-60%	Inadequate	Response addresses the requirements being scored, but there are one or more omissions, flaws, or defects or the requirements are addressed in such a limited way that it results in a low degree of confidence in the proposed solution.
70%	Adequate	Response adequately addresses the requirements being scored. Any omission(s), flaw(s), or defect(s) are inconsequential and acceptable.
80%	Good	Response fully addresses the requirements being scored with a good degree of confidence in the Applicant's response or proposed solution. No identified omission(s), flaw(s), or defect(s). Any identified weaknesses are minimal, inconsequential, and acceptable.
90%	Excellent	Response fully addresses the requirements being scored with a high degree of confidence in the Applicant's response or proposed solution. Applicant offers one or more enhancing features, methods or approaches exceeding basic expectations.
100%	Exceptional	All requirements are addressed with the highest degree of confidence in the Applicant's response or proposed solution. The response exceeds the requirements in providing multiple enhancing features, a creative approach, or an exceptional solution.

The **PROJECT NARRATIVE** must separately address each of the scoring criteria listed below; see instructions for the Project Narrative in Appendix A, Attachment 2.

1. Applicant Qualifications (Appendix A, Attachment 11) – Maximum 5 points

- Describe the experience and expertise the proposed Grantee has in implementing large-scale air quality incentive projects or programs and working with vehicle and equipment manufacturers, technology providers, and other key

project stakeholders. Scoring will be based upon the applicant's ability to successfully act as Grantee according to their demonstrable staffing, infrastructure, funding, and other available resources.

2. Project Team Capabilities and Degree of Industry Collaboration – Maximum 10 points

- Proposals that identify the end user of the proposed technologies or strategies to be used during the project. Applications that have all the project participants in place at time of application submittal will score higher than those that do not have all the needed participants identified in advance.
- Describe the roles and the work to be performed by each of the project's key participants, including project administration, end users, data collection and reporting, and community groups.
- Describe the administrative and technical qualifications and capabilities of key personnel, such as education and training, research and professional experience, publications (patents, copyrights, and software systems may be provided in addition to or substituted for publications), and the ability of the applicant to administer similar air quality programs.
- Describe the project team's relationship and degree of collaboration with among the project partners including vehicle and equipment manufacturers, charging/refueling infrastructure builders, end users, and data collection and analysis partners. Describe what business alliances and partnerships will be involved in commercialization of any pre-commercial technology proposed to be part of the project.
- Performance of the Grantee, technology manufacturer(s), end-users, and other project participants with previous CARB funded projects will also be considered.
- Describe any community based organizations that are in support of the proposed project, and any plans for ongoing engagement with those organizations.

3. Project Objectives and Work Plan (for Work Plan, see Appendix A, Attachment 2) – Maximum 15 points

- Provide a concise statement of how the project meets CARB's goal under the Zero- and Near-Zero Emission Freight Facilities Project solicitation and the FY 2017/18 Funding Plan.
- In a logical sequence, describe the tasks necessary to prepare for and conduct the proposed project. Tasks should be divided into the phases of the project,

as appropriate, and described in enough detail for reviewers to understand the scope of the work. Identify what entity (Grantee, industry partner, or data collection and analysis provider) will perform each task.

- Identify the extent to which renewable sources of energy will be used to support the zero- or near zero-emission technologies to be demonstrated. Projects employing a higher percentage of renewable energy will score higher than those employing a lower percentage or no renewable energy. Please note that the sole source of GHG reductions for the project cannot come from renewable energy use.
- Provide quantitative milestones for each budget period of the project, and identify them with a number, title, and planned completion date. The general duration for each task must be specified. Identify at which milestones disbursement requests will be made, at what amounts, and the deliverables associated with each milestone.
- Identify the entities that will be using the vehicles, equipment, strategies, and facility improvements included in the project and how the Grantee will ensure data will be reported as required to CARB.
- Describe the disposition of funded vehicles and equipment after the end of the proposed project.
- Identify the resources (e.g., equipment, machine and electronic shops, field and laboratory facilities, materials, etc.) to be used at each of the freight facilities that are part of the proposed project. Describe only those resources that are directly applicable to the proposed work. List important items of equipment already available for this project. If proposing an equipment acquisition, describe comparable equipment, if any, already at the freight facility and explain how they will work in concert during the project.
- Identify any fueling, charging, or other related infrastructure already in place that will be utilized by the proposed vehicles and equipment during the proposed demonstration project and the agreements that are planned or already in place to utilize the existing infrastructure.
- Specify if any mobile refueling will be included in the project and agreements that are planned or already in place to provide mobile refueling to funded vehicles and equipment.
- Identify any infrastructure, including charging and refueling infrastructure that will need to be installed to allow proper use of the vehicles and equipment identified in the project and a brief description of the process for planning and installation. Identify the entities that will be doing the infrastructure installation

and at what cost. Describe plans, if any, for future use of charging and refueling stations following the demonstration project.

- For proposals that include installation of a hydrogen refueling station to be funded as part of the project, provide a description of how all of the components of the Hydrogen Refueling Station Requirements (Appendix C) will be met. The proposal must include overall station performance parameters including, but not limited to, fuel quality, metering accuracy, fueling protocol, pressures, storage, compression, daily throughput, hourly peak throughput, and a plan to maintain and verify the same.
- For projects that include electric vehicle supply equipment (e.g., charging stations), identify the analysis that has been accomplished, if any, to identify and/or address grid impacts during peak electricity demand hours.
- For proposals that include fueling or charging infrastructure installation to be funded as part of the project, include information showing the infrastructure is designed and engineered to match the specific minimum fueling/charging needs of the proposed vehicles and equipment. The proposal must include a template illustrating station parameters that must be met, in addition to a “space or area” where parameters that must be supplied or provided by the applicant will be placed appropriate to the vehicles and equipment being served. Details must be provided explaining the existing similar infrastructure where the funded infrastructure is proposed to be sited (e.g., existing electrical infrastructure where proposed EVSE is to be sited, or existing fueling station or industrial facility where a proposed hydrogen refueling station is to be sited). In cases where the applicant would make the funded infrastructure available to non-project fleets, the proposal must include information showing how the applicant will plan for capacity adjustments to handle the additional demand.

4. Budget, Match Funding, and Financial Capabilities – Maximum 10 points

- Provide a clear and concise project budget that lists all expenditures and source of those funds in a logical sequence that leads to on-time completion of the project (see sample budget in Appendix A, Attachment 4). Administrative fees may not exceed 5 percent of the total amount awarded by CARB.
- Indicate the source of funding, CARB funds, cash match, and in-kind match, for each task, the amount of the funds for each task, and the amount of funds that are being used as match for the project. Funds that are identified as match must also indicate what entity is providing the match and if the match is part of the cash match or in-kind match.
- Demonstrate that the Grantee and/or technology manufacturer(s) will be financially capable of providing the minimum 50 percent match requirement of the total project budget (including the 10 percent cash requirement exclusive of

in-kind contributions). Higher match pledges will be scored higher. See section VI Required Match Funds for more information.

- Describe each financial contribution to the project (match funding or other leveraged funding) in addition to describing other current and pending funding sources for the required cost share match. Identify if all or a portion of the match funding is dependent upon successful grant award under any other solicitation.
- Attach Letter(s) of Commitment from each project partner stating that it is committed to providing a specific minimum dollar amount of cost sharing as part of the match funding requirement or as other leveraged funding. Letters must be signed by the person authorized by the entity to commit the expenditure of funds.

5. Potential Emission Reduction Benefits – Maximum 5 Points

- Describe in Appendix A, Attachment 3 the estimated emission reductions of GHG, criteria pollutant, and toxic air contaminant emissions (PM) as determined by using the methodology in Appendix D. Combined weighted criteria pollutant and PM emission reductions are to be based on exhaust emissions (tank to wheel) and calculated in tons reduced per year. The GHG emission reductions are to be based on life cycle analysis (well to wheel) and calculated in metric tons of CO₂ equivalent²⁰ reduced per year. Emission reduction calculations are required for two scenarios:
 - During the actual proposed project over a 2-year time frame; and
 - Two year post after the end of the proposed project with a useful life of ten years.
- **Show all math used in calculations.** Cite all sources and explain all variables used in the calculations that are not included in Appendix D.
- Describe the utility of the innovative technology to help California achieve its climate change and air quality goals by reducing GHG, criteria pollutant, and toxic air contaminant emissions, particularly in disadvantaged communities.
- If an alternative methodology is used to calculate the emission reductions for this project, all math should be shown and all values should be cited. Alternative methodologies will not be used to score the project but may provide insight to the scoring team on the potential emission reductions of the project.

²⁰ “CO₂ equivalent” means the number of metric tons of CO₂ emissions with the same global warming potential as one metric ton of another greenhouse gas.

- Summarized the expected emission reductions for the entire project as described in Appendix D.

6. Cost-Effectiveness – Maximum 5 Points

- Describe in Appendix A, Attachment 3 the estimated cost-effectiveness of the project in dollars per ton of combined criteria pollutant and weighted PM emissions reduced, and per metric ton of GHG emissions (in CO₂ equivalent) reduced for the two scenarios below, using the methodology in Appendix D:
 - During the actual proposed project; and
 - Two year after the end of the proposed project with a useful life of ten years for all on-road trucks, 5 years for pieces of equipment and the proposed useful life for any facility improvements and technologies that support ships at berth.
- If an alternative methodology is used to calculate the project's cost effectiveness for this project, all math must be shown and all values must be cited. Alternative methodologies will not be used to score the project but may provide insight to the scoring team on the potential emission reductions of the project and are not a replacement for the required methodology as described in Appendix D.

7. Disadvantage Community Benefit – Maximum 15 Points

- Projects that are located within a disadvantaged community(ies) will score better than those that provide benefits to a disadvantaged community(ies). Projects benefiting disadvantaged communities will score better than those projects that do not demonstrate benefits to disadvantaged communities.
- Describe how the project is located in or how it benefits disadvantaged communities. Being located in a disadvantage community is determined by the location of the freight facilities that are part of the proposed project and the vehicles or pieces of equipment that will be domiciled, registered or operated a majority of the time.

8. Technology and Innovation – Maximum 15 points

- Identify and describe all the technological innovations that are included in the proposed project. If a proposed technology is a component of a device, process or strategy, also describe the device, process or strategy. Descriptions should be understandable to reviewers who are not expert in the field. Cite (but do not include) patents if needed. Describe exactly what part of the technology is innovative, how it is innovative, and how it works.

- Describe what safety measures are in place to ensure safe operation and maintenance of the vehicle, equipment or facility improvements during operations, battery charging, refueling, maintenance, and other operational parameters. Identify any specific issues that first responders, such as firefighters, police, etc., should be aware of if an emergency is encountered, either due to internal or external forces, with vehicles, equipment, facility improvements and EVSE/refueling equipment funded under this demonstration.
- Explain the technical advantages of the innovations proposed as part of the project, and document performance claims.
- Describe what type of emission testing has already been done on the proposed technology(ies), if applicable.

9. Potential for Market Penetration and Commercialization of the Technology – Maximum 10 points

- For projects that contain pre-commercial technologies, define target markets and explain why the targeted industries would buy the innovation after a successful demonstration of the technology. Both markets within and outside of California should be considered.
- Describe the recent and expected growth or decline of the each of the targeted end-users, including vehicles, equipment and facilities.
- Identify the specific market for the proposed technology and describe its size and potential for growth.
- Describe any specific barriers to entry or expansion.
- Describe the commercialization plan for the proposed pre-commercial technology(ies).
- Describe what steps will be followed to gain CARB certification or verification of the proposed pre-commercial technology(ies) if needed.
- Describe the economic benefits or costs that a California business could expect if they operated advanced technology vehicles, equipment and facility improvements that are part of the proposed project.
- Describe any special training that will be required for installation and maintenance personnel.

10. Potential of Project to Act as a Showcase of Technology – Maximum 15 Points

- The goal of this solicitation is to fund bold transformative projects that have the capability to significantly demonstrate the cost effectiveness and environmental benefit of deploying such technologies at freight facilities and the movement of freight. The project application should describe how the proposed project will be transformative to freight facilities in California, nationally and internationally.
- Describe in the application the plans to share results and lessons learned from the project to other freight facility owners and operators, end-user fleets and freight equipment operators.
- Applications that contain multiple facilities, end-users, vehicle, and equipment types operating in concert will be scored higher than projects that have a limited number of facility, vehicle or equipment types included in the application.

11. Application Completeness – Maximum 5 points

- Applications that are clear, concise, and include all of the requested information will be scored higher than those that are unclear or missing information. Do not make a declaration as to application completeness in your submittal.
- Provide a written affirmation in the Project Narrative that all parties participating in the proposed project have read and agree to abide by the Sample Grant Agreement that is included in this Solicitation packet as Appendix B, and confirm that they are committing to fulfill obligations detailed in the application package.

12. Timeline for Project Completion – Maximum 5 points

- Provide a project schedule including the milestones as described in the Project Narrative and Work Plan section of Appendix A (Attachment 2). Both a tabular and graphic display (such as a Gantt chart) of the project schedule is preferred, but at a minimum, a tabular display is required. Information must include task duration, start and completion dates, and expected time to secure materials and construction services, in addition to the milestones being clearly identified.
- Demonstrate that all work will be accomplished by April 15, 2021.

13. Optional Extra Credit Scoring Criteria – Maximum 5 points

- Include in the project application all completed CEQA documents.

- Provide evidence of sub-agreements being in place, or Describe how the sub-agreements with all project partners are already in place at the time of application submittal.
- For commitments from local Community Base Organizations that are part of the proposed project team, indicate the level of support and what role the local community group will play in the proposed project.

XVI. GRANTEE SELECTION

The successful Grantee will be required to sign a Grant Agreement with CARB to fulfill the administrative duties and technical duties associated with the project (see Appendix B, Sample Grant Agreement).²¹ Signed grant agreements and approved governing board resolutions must be returned to CARB no later than the deadline described in the Solicitation Timeline in Section XIII of this Solicitation. If project Grant Agreements and approved governing board resolutions are not returned by the deadline, CARB, in its sole discretion, may deny the grant application and can redirect funds to another submitted application to this Solicitation or to another project in the Funding Plan as needed. If, in CARB's sole discretion, no submitted project proposal meets the goals of this Solicitation, Funding Plan, or AQIP Guidelines, no selection of a Grantee or technology manufacturer will be required to be made, and funding can be directed to another project identified in the Funding Plan as needed.

CARB, in its sole discretion, may make minor changes to proposed project milestones, work plan, or disbursement schedules in consultation with the applicant, for inclusion in the Grant Agreement.

NOTE: All CEQA requirements must be completed by November 1, 2018 and sub-agreements with all project partners must be executed by February 1, 2019.

²¹ As noted above, the Grant Agreement may not be executed unless and until any required CEQA review has been completed. For a project where an agency other than CARB is serving as lead CEQA agency, the applicant must submit any required final CEQA documents by November 30, 2018 (prior to execution of the Grant Agreement). If an applicant fails to meet this requirement, CARB may deny the grant application. CARB will independently review any CEQA documentation provided by the applicant. CARB may modify any Grant Agreement based upon information produced from the CEQA environmental review process. If CARB in its sole discretion finds a project's CEQA documentation inadequate, CARB retains absolute sole discretion to either (1) modify the grant agreement as necessary to comply with CEQA, (2) select other feasible alternatives to avoid significant environmental impacts, or (3) deny the grant application. No legal obligations will exist unless and until the parties have executed and delivered a mutually acceptable Grant Agreement, as informed by information produced from the CEQA environmental review process (to the extent applicable). See Appendix E for additional information.

XVII. IMPLEMENTATION PROCESS

A. Meetings

Before work begins, a kick-off meeting will be held in Sacramento between the Grantee, the technology manufacturer(s), end-users, data collection and analysis provider and CARB project management staff. The purpose of this meeting will be to discuss the work plan, details of task performance, the project schedule, any changes to the project team, and any issues that may need resolution before CARB -funded work begins. Project update meetings to discuss the project's progress will be held as often as needed, but typically monthly. These meetings can occur via telephone conference calls upon approval of the CARB Project Liaison. Project update meetings are the responsibility of the Grantee to schedule and prepare a meeting agenda. Project update meetings need to contain, but are not limited to:

- Agenda for the meeting with conference call information;
- Update of the status of the project;
- Discussion of any difficulties encountered since the last project update meeting;
- Discussion on any deliverables that are nearing a due date;
- Notification of any pending disbursement requests; and
- Schedule of the next project update meeting.

Site visits by CARB staff may be required at CARB's sole discretion. A final meeting, or conference call pending CARB Project Liaison approval, will be held at the conclusion of the project to review the results and discuss the status of commercialization plans.

B. Project Funding Procedure

In order to receive a disbursement, the Grantee must submit a grant disbursement request to CARB. The Grant Disbursement Request Form (Appendix B, Exhibit C) must be signed by the party authorized and designated in the Grant Agreement, mailed to CARB and must include all information to substantiate the eligibility of costs to be reimbursed. GGRF grant funds will only be issued for vehicles, equipment, facility improvements and other eligible components that are identified in the Project Narrative and Work Plan included in the application package, memorialized in the signed Grant Agreement, and that have already been rendered. A detailed invoice will be required. A Progress Report on the status of the project to date, including the milestones and associated deliverables for which the disbursement request is requesting reimbursement, is required for all disbursement requests. The advance of grant funds will not be allowed in any cases. All disbursements, including administration and project funding are made on a reimbursement basis after expenses are incurred by the grantee or other project partners.

Disbursements will be made following the procedure described in the Reporting and Monitoring Requirements section of this Solicitation and the signed Grant Agreement.

NOTE: The Application package including the Budget submitted by an Applicant, if selected for funding, will be incorporated by reference as part of the Grant Agreement. Costs associated with project implementation detailed in the Application must consider the time frame of the proposed project and may cover an increase in costs that take into account inflation or planned cost of living increases. The application submitted will be the actual costs for the project and will not be amended due to faulty estimations by the applicant, increases in costs due to inflation or other reasons that have not been covered in the proposed budget.

C. Reporting and Monitoring Requirements

The Grantee must submit numbered status reports accompanying grant disbursement requests to CARB at least every three months, but may submit on a monthly basis if necessary for more frequent invoicing with prior approval from CARB. These reports must be approved by CARB and must contain the following information, at a minimum, in either Microsoft Word or PDF, as a single electronic file:

- Project Status Report number, title of project, name of Grantee, date of submission, and project grant number;
- Summary of work completed since the last progress report, noting progress toward completion of tasks and milestones identified in the work plan;
- Statement of work expected to be completed by the next progress report;
- Notification of problems encountered and an assessment of their effects on the project's outcome;
- Data collected from vehicles and equipment since the last data reporting,
- Itemized invoice showing all costs for which reimbursement is being requested; and
- Discussion of the project's adherence to the project timeline.

A final report is required at the end of the project and must include:

- A description of the project's goals and objectives, methods, results of the demonstration, and future application of the technology;
- An update on the commercialization prospects of any funded pre-commercial technologies;
- An update on broader acceptance of any technologies that are the part of the project;
- Efforts by the project team to use the proposed project as a showcase of the funded technologies and strategies; and

- How disadvantaged communities benefited by having a proposed project or part of a proposed project in their community.

Final reports will be made public and posted on CARB's website. Requests for additional information may be required by CARB, at its sole discretion, to evaluate reports and to determine if a monthly, quarterly, or final report is complete.

If the Grantee plans on pursuing official verification or certification of the emission reducing potential for its proposed technology, the Grantee must submit documentation in support of that verification or certification to CARB's Project Liaison. Any supporting documentation sent to CARB, U.S. EPA, or any other government agency granting certification or verification, must be concurrently submitted to the Project Liaison assigned to the project, as identified in the Grant Agreement (see Appendix B).

Changes in the project budget, re-definition of deliverables, or extension of the project schedule may not be possible and should be avoided. In cases where minor changes are allowed, they must be approved in advance and in writing by CARB and may require a grant amendment. Once a grant is in place, minor changes to the work to be done or other project scope changes may be considered by CARB, in consultation with the Grantee or technology manufacturer(s). CARB reserves the right to terminate a grant if CARB determines, in its sole discretion, that the objectives cannot be reached or that the Grantee, technology manufacturer(s), or their subcontractors cannot or will not perform the required work in a timely manner, as specified in Section 6 of the Grant Agreement.

The Grantee and technology manufacturer(s) must allow CARB, the California Department of Finance, the California Bureau of State Audits, or any authorized designee access, during normal business hours, to conduct reviews and fiscal audits or other evaluations. Access includes, but is not limited to, reviewing project records, site visits, interviews, and other evaluations as needed. Project evaluations or site visits may occur unannounced as CARB staff or its designee deem necessary.

XVIII. ADMINISTRATION

A. Cost of Developing Application

The Applicant is responsible for the cost of developing an Application, and this cost cannot be charged to the State. In addition, CARB is not liable for any costs incurred during environmental review or as a result of withdrawing a proposed award or canceling the solicitation.

B. Errors

If an Applicant discovers any ambiguity, conflict, discrepancy, omission, or other error in the solicitation, the Applicant shall immediately notify the CARB of such error in writing

and request modification or clarification of the document. The CARB shall not be responsible for failure to correct errors.

C. Immaterial Defect

The CARB may waive any immaterial defect or deviation contained in an Applicant's application. CARB's waiver shall in no way modify the Application or excuse the successful Applicant from full compliance.

D. Disposition of Applicant's Documents

All applications and related material submitted in response to this solicitation become a part of the property of the State and public record.

E. Applicant's Admonishment

This solicitation contains the instructions governing the requirements for funding Applications to be submitted by interested Applicants, including the format in which the information is to be submitted, the material to be included, the requirements which must be met to be eligible for consideration, and Applicant responsibilities. Applicants must take the responsibility to carefully read the entire solicitation, ask appropriate questions in a timely manner, submit all required responses in a complete manner by the required date and time, and make sure that all procedures and requirements of the solicitation are followed and appropriately addressed.

F. Agreement Requirements

The content of this solicitation and each grant Recipient's application shall be incorporated by reference into the final agreement. See the sample Agreement terms and conditions included in this solicitation.

G. CARB Reserves the Right to Negotiate with Applicant

CARB reserves the right to negotiate with Applicants to modify the project scope, the level of funding, or both. If the CARB is unable to successfully negotiate and execute a funding agreement with an Applicant, the CARB, at its sole discretion, reserves the right to withdraw the pending award and fund the next highest ranked eligible project. This does not limit CARB's ability to withdraw a proposed award for other reasons, including for no cause.

H. No Agreement Until Signed

No agreement between CARB and the successful Applicant is in effect until the agreement is signed by the Recipient and signed by the authorized ARB representative. Costs are only subject to reimbursement by the CARB after execution; no costs incurred

prior to execution of the agreement are reimbursable using CARB funds. No Modifications to the General Provisions

I. No Modifications to the General Provisions

Because time is of the essence, if an Applicant at any time, including after Preliminary Grantee Selection, attempts to negotiate, or otherwise seeks modification of, the General Conditions (attached as Appendix B, Sample Grant Agreement, section 10), the CARB may reject an application or withdraw a proposed award. This does not alter or limit CARB's ability to withdraw a proposed award for other reasons, including failure of a third party agency to complete CEQA review, or for no cause.

J. Payment of Prevailing Wages

All applicants must read and pay particular attention to Appendix B, Sample Grant Agreement Section 10.17 entitled "Prevailing wages and labor compliance". Prevailing wage rates can be significantly higher than non-prevailing wage rates. Failure to pay legally-required prevailing wage rates can result in substantial damages and financial penalties, termination of the grant agreement, disruption of projects, and other complications.