2014-2015 GRANT SOLICITATION

Air Quality Improvement Program and Low Carbon Transportation Greenhouse Gas Reduction Fund (GGRF) Investments

Advanced Technology Freight Demonstrations: Zero-Emission Drayage Truck Project

Mobile Source Control Division
California Air Resources Board
June 23, 2015

California Environmental Protection Agency
Air Resources Board

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California Air Resources Board
Air Quality Improvement Program and Low Carbon Transportation
Greenhouse Gas Reduction Fund Investments

Zero-Emission Drayage Truck Demonstration Project

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I. SUMMARY

The California Air Resources Board (ARB or Board) is soliciting one or more Grantees to implement and administer the Zero-Emission Drayage Truck (ZEDT) Demonstration Project under the Fiscal Year 2014-15 Funding Plan for the Air Quality Improvement Program and Low Carbon Transportation Greenhouse Gas Reduction Fund (GGRF) Investments (FY 2014-15 Funding Plan).[1] This project, along with the Multi-Source Facility Demonstration Project, is part of a $50 million allocation for advanced technology freight demonstrations and complements a separate project to deploy early commercial zero-emission trucks and buses. It is anticipated that up to $23,658,500 will be available under this Solicitation for the Zero-Emission Drayage Truck Demonstration Project, and several independent projects may be selected. Drayage trucks, for the purpose of this Solicitation, are defined as Class 8 (>33,000 pounds gross vehicle weight rating (GVWR)) heavy heavy-duty on-road trucks that are used to transport cargo to or from California's ports and intermodal rail yards, and to or from regional warehouses, distribution centers, or other such logistical operations. Projects funded under this solicitation will demonstrate full zero-emission drayage trucks and drayage trucks that offer zero-emission miles (near zero-emission) by employing on-board range extending internal combustion engines or other technologies (see Section IX, Eligible Projects for further details). The project(s) funded under this Solicitation will reduce greenhouse gas (GHG) emissions and provide economic, environmental, and public health co-benefits to Disadvantaged Communities as identified by the California Environmental Protection Agency (Cal/EPA)[2] while demonstrating the practicality and economic viability of widespread adoption of advanced zero-emission drayage trucks. All work shall be completed by April 15, 2019. Specific tasks are outlined within this Solicitation. Applications are due to ARB no later than **5:00 p.m., September 24, 2015**.

This Solicitation is issued under the Assembly Bill 118 (AB 118) Air Quality Improvement Program's (AQIP) Advanced Technology Freight Demonstration Projects and the Low Carbon Transportation Investments with all project funds coming from the Greenhouse Gas Reduction Fund (GGRF). The project is intended to fund technologies on the cusp of commercialization that further the purposes of AB 32 (Nunez, Chapter 488, Statutes of 2006). 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.

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 ARB, to fund clean vehicle and equipment projects, air quality research and workforce training.

[1] The approved FY 2014-15 Funding Plan is available at http://www.arb.ca.gov/msprog/aqip/fundplan/fundplan.htm.
[2] The identified disadvantaged communities census tracts are available at http://www.calepa.ca.gov/EnvJustice/GHGInvest/.

As required in Health and Safety Code (HSC) Section 44274(a), the Board adopted regulatory guidelines in 2009 for AQIP. The Guidelines for the AB 118 Air Quality Improvement Program (Guidelines)[3] define the overall administrative requirements and 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 AQIP funds appropriated to ARB in the annual State Budget. The funding plan focuses AQIP 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 3 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.

In 2014, the Legislature appropriated $200 million dollars in GGRF monies to establish a Low Carbon Transportation GGRF program that ARB 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).[4] The 3-year Investment Plan, which was released in May 2013, 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 addition, SB 535 directs at least 25 percent of funding from GGRF be allocated toward projects that benefit disadvantaged communities and at least 10 percent be allocated toward projects located in disadvantaged communities, as identified by the California Environmental Protection Agency (Cal/EPA).[5]

Because the Governor'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,

[3] The Guidelines for the AB 118 Air Quality Improvement Program are available at www.arb.ca.gov/msprog/aqip/aqip.htm.
[4] The Cap-and-Trade Auction Proceeds Investment Plan is available at http://www.arb.ca.gov/auctionproceeds.
[5] The identified disadvantaged communities census tracts are available at http://www.calepa.ca.gov/EnvJustice/GHGInvest/.

staff has combined the two funding sources (AQIP and Low Carbon Transportation GGRF Investments) into one funding plan. The Funding Plan for AQIP and Low Carbon Transportation GGRF Investments is designed to support development and commercialization of advanced technologies that are necessary to meet California's long-term air quality and climate goals. The Funding Plan identifies projects that provide both immediate emission reductions from the vehicles 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. Funding is provided for projects that support evolution through three phases of technology advancement: demonstration, commercialization, and transition to widespread deployment. For the demonstration phase, the FY 2014-15 Funding Plan allocated up to $50 million combined for the Multi-Source Facility and Zero-Emission Drayage Truck Demonstration Projects. To incentivize the deployment of early commercial technologies, and as a complementary investment, the Funding Plan also allocated up to $25 million for a Zero-Emission Truck and Bus Pilot Project. Solicitations for each FY 2014-15 demonstration and pilot project will be released separately.

III. NEED FOR EMISSION REDUCTIONS FROM DRAYAGE TRUCKS

The movement of freight within, through, and out of California via ports, intermodal yards, and distribution centers, utilizing Class 8 drayage trucks are a large source of GHG, criteria pollutant, and toxic air contaminant emissions, especially since drayage trucks tend to be older vehicles with few or no emission controls. Since these vehicles tend to congregate near the facilities they service and emit large amounts of oxides of nitrogen (NOx) and diesel particulate matter (PM), nearby communities are most heavily impacted. Reducing emissions from these trucks 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.

In December 2007, ARB approved a new regulation to reduce emissions from drayage trucks transporting cargo to and from California's ports and intermodal rail yards. However, 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 fully integrated into the marketplace.

IV. CURRENT TECHNOLOGY

Zero-emission technology has not yet made its way into the Class 8 truck market, although commercialized zero-emission truck technology is now found in lower weight classes primarily used in urban delivery and transit bus applications. Those smaller zero-emission trucks and buses are utilizing electric drive systems with on-board energy stored completely in battery packs, or battery packs coupled with fuel cells acting as

range extenders. Since drayage trucks generally have limited daily mileage, return to a home yard every night, and spend a large amount of time in creep mode, expanding the existing technologies to the drayage truck application presents a well-suited opportunity to showcase technologies with potential for commercial viability. Additionally, technologies successfully demonstrated in the drayage vocation can advance the current state of zero-emission truck technology, further the ability of zero-emission mileage capable trucks to expand into longer range vocations, and reduce harmful emissions.

Infrastructure to support zero- and near zero-emission drayage trucks is another important consideration. Charging infrastructure and/or refueling equipment for heavy-duty vehicles is not yet standardized, except for electric transit buses. Charging and refueling infrastructure is an eligible expense for projects funded under this Solicitation, and their demonstration with advanced technology drayage trucks can further the infrastructure standardization efforts for heavy-duty vehicles.

V. AVAILABLE FUNDING

In June 2014, ARB approved the FY 2014-15 Funding Plan, allocating up to $50 million in advanced technology demonstrations, including funding for large-scale zero-emission drayage truck demonstration projects that benefit disadvantaged communities. The anticipated total funding available through this Solicitation is up to $23,658,500 million. If additional funds become available, and valid applications remain unfunded, those projects may be funded without reissuing a solicitation. The total amount of funding available includes a $1 million reduction for data analysis. This money will be used for data collection and analysis on awarded demonstration projects in this category.

This Solicitation may fund such activities as construction and deployment of prototypes, infrastructure, emissions testing, and practical demonstrations of technologies with a high potential to be commercialized. It may not be used to fund basic research, design-only projects, or commercial production. Practical field demonstrations are required for vehicles funded under this Solicitation.

Funding is to be broken down as follows:

- Vehicle, technology, and infrastructure production and installation.
- Demonstration of the deployed vehicle technology, infrastructure, and data collection (data analysis will be accomplished through an independent third-party entity contracted by ARB).
- Administrative costs (administrative costs shall not exceed 5 percent of the project amount funded by ARB).

In the event additional funding is provided from Low Carbon Transportation Investments for the Zero-Emission Drayage Truck Demonstration Project, these funds may be administered under this Solicitation at ARB’s sole discretion.

VI. REQUIRED MATCHING FUNDS

The Grantee is required to match a minimum of 25 percent of the total project cost. 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 and/or technology demonstrator (exclusive of providing in-kind contributions). Cash includes labor and capital outlays during the term of the Grant Agreement.
- 15 percent or more of the total project cost may be through some combination of in-kind contributions such as labor, equipment, materials, equipment transportation, private financing, and federal or non-AB 118 and non-GGRF sourced state funds. While other publicly funded projects may work in tandem or as part of a project funded under this program, none of those funds or anything funded by those projects may be included in fulfilling any of the 25 percent match requirement; however, assets from publically funded projects can be counted toward the match if the contract requirements are complete at the time of the application. For example, electric charging or fueling infrastructure funded under another State project may be leveraged to support a Zero-Emission Drayage Truck Demonstration Project but may only be used to meet part of the Grantee match requirements if the contract requirements with the State for that fueling infrastructure are no longer in effect. 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 demonstrator.

If a third party, (i.e., a party other than the Grantee or technology demonstrator) 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 of cost sharing and the source of such funds. 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) for the application. The Grantee must demonstrate its expertise implementing demonstration projects and providing administration and oversight for the demonstration project. Private sector parties, i.e., technology demonstrators and end-users interested in demonstrating a strategy, must partner with an air district, other California-based public entity, or California-based non-profit organization in submitting a demonstration project proposal. Only projects from eligible Grantees will be scored.
Eligible applicants must meet all applicable requirements of State law and regulations, the AQIP Guidelines and FY 2014-15 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 AQIP Application (Appendix A)

and demonstrate that they meet the applications requirements (see Section XII of this Solicitation). ARB may request clarification regarding application responses during the application review process.

An eligible Grantee can request demonstration project funds without an identified technology demonstrator(s), with a commitment to solicit for the project partners once funds are secured from ARB via this competitive Solicitation process. However, projects that already have all the needed participants, such as the identified end users of the proposed vehicles, technology demonstrator(s), 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 public agency or non-profit organization 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 advanced technology demonstration projects;
- To accept the Grant funds from ARB; and
- To 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 project proposal contributes a match to the project, the governing board resolution shall authorize the Air Pollution Control Officer or other 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 demonstrator(s) and the Grantee need to be in place before work can begin.

VIII. RESPONSIBILITIES OF GRANTEE AND TECHNOLOGY DEMONSTRATOR

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

- Submission of demonstration project proposal (application) to ARB;
- Administration of the project;
- Oversight of technology demonstrator(s);
- Maintaining oversight of the project budget and the amount of funds that are being used for the project's match requirement;
- Reporting to ARB on project status and Grant performance;

- Submission of periodic reports and Grant disbursement requests to ARB;
- Ensuring purchase, installation, and maintenance of data logging or other data collection equipment as deemed necessary by ARB;
- Submission of data, as requested by ARB and/or ARB's selected independent, third-party data analysis provider; and
- Coordinating periodic project status update meetings.

The technology demonstrator's major responsibilities in the demonstration 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 demonstration project goals;
- Installation and maintenance of data collection equipment and data collection as required by ARB; and
- On-time reporting to the Grantee on project status and Grant performance.

Progress reports from the technology demonstrator(s) shall be submitted to the Grantee at a minimum of three-month intervals. The Grantee is responsible for forwarding all progress reports, unaltered, to ARB within seven business days of receipt from the technology demonstrator(s) (see Reporting and Monitoring Requirements in Section XVII, Implementation Process). Additionally, every Grant disbursement request shall be accompanied by a progress report that documents the time interval 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 heavy-duty demonstration projects, data analysis will be accomplished through an independent third party selected through a separate process. To avoid conflict of interest, a grantee selected for the Zero-Emission Drayage Truck Demonstration Project must be separate and unique from the third-party data analysis provider and will not be eligible to compete for the data analysis work. However, other project team participants are eligible to apply for the data analysis work, provided they are not the demonstration project Grantee and are not involved in data gathering or analysis for the demonstration project.

Data collection will be required throughout the demonstration project, and the data gathered will be required to be submitted to ARB and/or the third-party data analysis provider periodically and as part of project milestones. The Grantee must agree to purchase and install data logging or other equipment as deemed necessary by ARB in order to facilitate data collection. For each demonstration vehicle, the Grantee must include $2,000 in their submitted budget for the purchase of data collection equipment. The type of data to be collected includes, but is not limited to, fuel/electricity consumption, fueling/charging times, state of charge information for battery and fuel cell electric vehicles, odometer readings, maintenance information, relevant telematics and

GPS data, operating costs, hours of operation, idle times, temperatures, and user experience. Data collection and emission testing will also be required for baseline vehicles where appropriate. The Grantee will be required to work with the third-party data analysis provider to select and provide access to representative baseline vehicles with comparable duty cycles. Final determination of data to be collected and emission testing protocols will be made by ARB, at its sole discretion.

A final report must be submitted to ARB from the Grantee and technology demonstrator(s) at the conclusion of the demonstration project. The demonstration project will not be complete until the final report has been accepted by ARB. 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 ARB. The Draft final report is due to ARB no later than April 1, 2019 (see Sample Grant Agreement, Appendix B). ARB 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

ARB's goal under the Zero-Emission Drayage Truck Demonstration Project is to fund emerging zero and near-zero emission advanced technologies that are not yet commercially available (i.e., not yet produced for sale) but projected to be within three years of commercialization. While the focus of past demonstrations has been directed at small-scale projects with fewer than 10 vehicles or pieces of equipment, this demonstration project's exclusive focus is on large-scale deployment of multiple technology types for on-road Class 8 drayage trucks, demonstrating different methods of zero-emission main vehicle propulsion for all or a significant portion of a drayage vocation duty cycle, under certain requirements further discussed in this Solicitation.

This competitive Solicitation is expected to accelerate zero-emission on-road heavy-duty truck technology. Projects that can utilize full zero-emission technology may score higher than those technologies that only partially eliminate emissions (near zero-emission). In addition, projects that can build on synergies generated from established infrastructure investments and experience with existing zero-emission technologies are encouraged to apply. Projects should provide a significant improvement in air quality for many affected areas within the state when fully integrated into the marketplace.

The eligible zero- and near zero-emission projects that can be funded by this Solicitation are required to achieve significant reductions in GHG and co-pollutant emissions and provide benefits to disadvantaged communities. Only projects that provide benefits to disadvantaged communities, as specified in this Solicitation, will be scored. To determine whether a project qualifies as benefiting a disadvantaged

community, applicants must use the criteria in ARB's Interim SB 535 Guidance.[6] Applicants are required to make an affirmation in their application Project Narrative (Appendix A, Attachment 3) as to which criteria is being satisfied from Step 1 or Step 2 of Attachment 6 in Appendix A, 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 technologies and logistics/operations efficiency improvements may also be included. Two project types will be considered under this Solicitation:

- Zero-emission: technologies that produce no tailpipe greenhouse gas, criteria pollutant, or toxic air containment emissions during the drayage truck's entire duty cycle, whether stationary or operating, as well as infrastructure that supports such technologies; and
- Near zero-emission: technologies that produce no tailpipe greenhouse gas, criteria pollutant, or toxic air containment emissions when the drayage truck is operating in a disadvantaged community and on port, rail yard, intermodal facility, distribution center, or warehouse property, as well as infrastructure that supports such technologies. When the near zero-emission truck is required to be in zero-emission mode, this will be required to be done automatically without required inputs from the truck operator.

Vehicle propulsion technologies that are eligible to be funded may include, but are not limited to, battery-electric trucks, fuel-cell trucks, and battery-electric trucks utilizing fuel cells or internal combustion engines acting as range extenders. While it is envisioned that only electric-drive trucks will be funded under this Solicitation, the only technological requirement is that the trucks achieve zero-emission miles while operating in disadvantaged communities and on port, rail yard, intermodal facility, distribution center, or warehouse property.

X. SCOPE OF WORK

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

Projects should contain at least a two-phase staggered zero-emission drayage truck deployment. The first phase of trucks should be smaller in number than the second and be near their final confirmation. First-phase trucks should be deployed into their field demonstration with the intent of demonstrating their functionality in drayage service,

[6] ARB's Interim SB 535 Guidance, Appendix A, contains the criteria for determining whether a project is located within a disadvantaged community or provides a benefit to a disadvantaged community. This Guidance is available at: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/final535-interim-guidance-11-3-2014.pdf

determining actual vehicle ranges, applicability of charging and/or refueling infrastructure, and other important operational and maintenance parameters. The second-phase truck deployment should be almost identical to the first-phase trucks but must incorporate any technical and operational lessons learned from the first deployment of trucks in order to make the second round of trucks and infrastructure more efficient, useful, robust, and commercially viable.

The goal for truck mileage range is to achieve up to a 200-mile daily range with up to 100 miles of daily zero-emission range. The use of smaller internal combustion engines as range extenders will be allowed under this Solicitation; however, zero-emission miles will be required. All drayage trucks will be required to operate in zero-emission mode while at a port, rail yard, intermodal facility, warehouse, or distribution center and while operating in identified disadvantaged communities. For each drayage truck equipped with an internal combustion engine, automated geofencing technology, which will geographically sense where the truck is at any time, will be required to be used to ensure that the drayage truck is operating in zero-emission mode in the required areas identified in Section IX.

Practical field demonstrations are required for vehicles funded under this Solicitation. Field demonstrations must be done while the truck is in revenue service in its intended vocation. Field demonstrations should provide enough data to determine the economic viability for the continued use of zero-emission drayage trucks.

Data collection will be a required element of all funded projects. Data analysis, which is an important part of each project, will be accomplished by an independent third party that ARB selects, and all types of data to be collected will be determined at ARB's sole discretion, in consultation with the project's technology demonstrator(s) and Grantee. All project team participants must work cooperatively with the third-party data analysis provider and supply data as requested in a timely manner. The sharing of data collected from trucks, infrastructure, and other relevant equipment with ARB's third-party data analysis team is required.

Reproducible emission testing for internal combustion engines to verify the emission benefits from the demonstration of technologies funded under this Solicitation will be required to be performed. When NOx emissions are being measured, the result will be shown as NOx and nitric oxide (NO) plus nitrogen dioxide (NO_2). The emission testing procedure used to verify emission reductions must be cited in the project's narrative (see Appendix A, Attachment 3). The final emission testing procedure will be subject to ARB approval.

A "well-to–wheel" analysis to quantify GHG emission reductions is required for all vehicles and equipment funded under this Solicitation. The applicant is required to determine the resulting emission reductions associated with their project (see Appendix D for the methodology). All calculations must be shown in their entirety and included in the application (Appendix A, Attachment 4). Incomplete illustration of the mathematical processes used will result in no points being allocated for scoring

criteria 5 and reduced points allocated under scoring criteria 10 in Section IV, Evaluation, Scoring, and Preliminary Selection, as well as possible disqualification.

Data collected from emission testing as part of a selected demonstration project and included in the project's submitted work plan and scope of work can be applied toward ARB or U.S. EPA certification or verification. However, Air Quality Improvement Program (AQIP) funds or GGRF Low Carbon Transportation Investments cannot be used directly to fund formal ARB or U.S. EPA verification or certification processes.

If the project uses any engine, retrofit, or vehicle that has 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 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 for the vehicle that is proposed to be used for the technology demonstration (see Appendix A, Attachment 3).

A. 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, ARB 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 drayage 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. Instructions will not be provided as part of this Solicitation as to the pathway to certification or verification.

However, ARB will be holding separate workshops as part of a broader effort to facilitate ARB certification of the next generation of advanced truck and bus technologies California needs to meet its long-term air quality and climate goals (ARB Innovative Technologies Regulation workshops). To be notified of the date, time, and location of the next ARB Innovative Technologies Regulation workshop, or for questions related to the proposed Innovative Technologies Regulation, please visit http://www.arb.ca.gov/msprog/itr/itr.htm or contact Mr. Joe Calavita at joe.calavita@arb.ca.gov or 916.445.4586.

As part of a viable commercialization plan, ARB verification or certification must be the ultimate goal of all vehicles that are not zero-emission and are funded under this Solicitation. Zero-emission vehicles need an ARB approval for legal operations. For any technology that will require ARB 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 government certification and verification protocols. Projects selected for funding will require all submittals of documents to non-ARB

certifying authorities to be concurrently submitted to ARB for routine Project Update meetings as discussed in Section XVII, Implementation Process.

B. 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. 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, warehouse, and while transiting disadvantaged communities. The determination when a vehicle 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.

C. Infrastructure

As stated in the previous section, 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, 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.

ARB will only process applications for infrastructure projects where the project is proposed to be sited where similar infrastructure already exists (e.g., installing electric vehicle supply equipment where electrical infrastructure already exists, or installing a hydrogen refueling station at an existing fueling station or industrial facility). Proposed projects that can synergistically take advantage of existing fueling or charging infrastructure should show a cost-effective advantage to other proposed projects that will require stand-alone infrastructure to be installed as part of a project (see Evaluation and Scoring Criteria 3 in Section XV).

Emission reductions that are associated with any infrastructure funded by this Solicitation are not allowed to be included as part of the emission reduction totals that will be considered during proposal scoring. In other words, emission reductions will only be assigned to the advanced technology vehicles funded under this Solicitation.

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 ARB 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.**

Projects that propose a dual use (public and private) charging/refueling station are encouraged. Charging/refueling stations that allow both the project vehicles and other advanced technology vehicles that are not being funded, such as zero-emission commercial medium-duty electric trucks and buses or private heavy- or light-duty electric or fuel cell vehicles, may be scored higher.

1. 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 California Environmental Quality Act (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 hydrogen refueling 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 are designed to 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. As noted above, ARB will only process applications for infrastructure projects (including hydrogen refueling stations) where the project is proposed to be sited where similar infrastructure already exists (e.g., installing a hydrogen refueling station at an existing fueling station or industrial facility).

2. Electric Vehicle Supply Equipment

Proposals containing electric vehicle 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). Any proprietary protocol may additionally be superimposed on the system, provided the site owner is able to revert to the open standard protocol. 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 are designed to 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. As noted above, ARB will only process applications for

infrastructure projects (including EVSE installations) where the project is proposed to be sited where similar infrastructure already exists (e.g., installing electric vehicle supply equipment where electrical infrastructure already exists).

XI. PROPRIETARY INFORMATION AND INTELLECTUAL PROPERTY

ARB 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 ARB. Additionally, the technology demonstrator(s) 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 7 for Procedures for Handling Confidential Information. If you wish to include confidential information, you must:

- Complete the Confidentiality Provision (Appendix A, Attachment 7) 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 ARB staff and may include reviewers outside of ARB 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 ARB receives a request for disclosure of the information claimed as confidential. ARB may share confidential information related to a demonstration project (such as certification/verification data) with multiple units and sections within ARB 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. ARB may request clarification regarding application responses during the application review process. 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. ARB will not review patent documents, engineering drawings and specifications, or promotional materials. Include in your application package letters of support 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.

Required Application Elements

ARB requires applications to be accurate, and applicants are strongly encouraged to ensure their applications are brief and clear. 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: Applicant Qualifications
- Attachment 2: Project Executive Summary
- Attachment 3: Project Narrative and Work Plan
- Attachment 4: Emission Reduction and Cost-Effectiveness Calculations
- Attachment 5: Proposed Budget and Project Milestone and Disbursement Schedule
- Attachment 6: Disadvantaged Communities Eligibility Determination
- Attachment 7: Procedures for Handling Confidential Information
- Attachment 8: Letters of Commitment
- Attachment 9: California Environmental Quality Act Worksheet (if applicable)
- Attachment 10: Conflict of Interest Declaration
- Attachment 11: STD. 204 Payee Data Record (**required even if applicant is a public entity**)

XIII. APPLICATION INSTRUCTIONS

Appendix A contains the forms and information necessary for submittal of a complete application. ARB 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 ARB and will become a public record once a Grantee(s) is selected and a Grant Agreement is signed. If no qualified proposal is submitted, ARB will not award a grant and will re-evaluate this Solicitation to re-solicit for project proposals or other options at ARB'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 ARB no later than **5:00 p.m. (Pacific Time) on September 24, 2015** (delivery service provider tracking number may be used to verify date of receipt). Applications received after September 24, 2015 may be rejected and not scored.

Applications must be mailed to the following address:

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

Applications submitted in person may be delivered to the following address:

Earl Landberg
Air Resources Board
Mobile Source Control Division
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 Application Completeness and lets ARB staff know that your formal application is on the way. ARB will send a confirmation email 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	June 23, 2015	--
Applicant Question Deadline	July 14, 2015	5:00 pm
Applicant Workshop	July 16, 2015	10:00 am
Application Submittal Deadline	**September 24, 2015**	**5:00 pm**
Preliminary Grantee Selection	October 22, 2015	5:00 pm
Final CEQA Documentation Submittal Deadline**	December 1, 2015	5:00 pm
Execute Grant Agreement and Return to ARB***	December 31, 2015	5:00 pm

* Timelines are subject to change at ARB's sole discretion.
** This step only applies for projects containing infrastructure proposals where an agency other than ARB is the lead CEQA agency for the project.
*** Includes governing board resolution.

XIV. APPLICANT WORKSHOP

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

Date: July 16, 2015
Time: 10:00 a.m. – 12:00 p.m. (Pacific Time)
Place: Cal/EPA Headquarters, Conference Room 710
1001 I Street, Sacramento, California 95814

Teleconference Information:

Call-in Phone Number: 800-593-0695
Passcode: 37043

The Applicant Workshop will be open to all interested entities. The intent of the Applicant Workshop 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 Workshop 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 days prior to the Applicant Workshop. The questions and answers from the Applicant Workshop and any questions received via email will be posted on the ARB website no later than **5:00 p.m. (Pacific Time) on August 6, 2015**; this date may be extended at ARB's sole discretion. ARB will not answer questions regarding this Solicitation after the Applicant Workshop. Any verbal communication with an ARB 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

ARB will evaluate each application based on the criteria described below. The maximum score is 100 points. The qualified applicant(s) with the highest overall

score(s) will be selected as the Grantee(s). The preliminary selection of a project does not in any way commit ARB to approving the grant. The selected applicant will be required to sign a Grant Agreement with ARB 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 ARB is serving as lead CEQA agency, the applicant must submit any required final CEQA documents by December 1, 2015 (prior to execution of the Grant Agreement). If an applicant fails to meet this requirement, ARB may deny the grant application. ARB will independently review any CEQA documentation provided by the applicant. ARB may modify any Grant Agreement based upon information produced from the CEQA environmental review process. If ARB in its sole discretion finds a project's CEQA documentation inadequate, ARB 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). ARB, 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. ARB 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 addition, 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), carry the remaining funds forward to the next fiscal year, or shift the funds to another project category.

It is anticipated that up to $23,658,500 for all selected projects will be available under this Solicitation. An independent third-party data analysis provider will be retained by ARB. The total amount of funding available includes a $1 million reduction for funding third-party data analysis, which will be accomplished under a complementary solicitation process. If additional funds become available, and valid applications remain unfunded, those projects may be funded without reissuing a Solicitation at ARB's sole discretion.

ARB will score projects based on the funding amount and budget requested. 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.

Only eligible projects will be scored, and only eligible vehicles and equipment will be scored and considered for funding. To be eligible, applicants must demonstrate in the Project Narrative (Attachment 3 of the Project Application) that the proposed project will provide benefits to disadvantaged communities as outlined in Section IX, Eligible Projects. 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). Benefits to disadvantaged communities under this Solicitation will not be a

basis for scoring projects but is instead used to determine if a project is eligible. Applications that do not meet the requirements for benefitting disadvantaged communities will not be scored. Further information on determining benefits to disadvantaged communities can be found in Appendix A, Attachment 6. Additionally, only applications proposing to utilize drayage trucks employing zero- and near zero-emission technologies with or without supportive infrastructure will be scored and considered for funding.

Optional Minimal Project Proposal

In addition to their project proposal, the applicant may include an optional proposal for a minimal project that is a smaller scale and scope of the original proposal's elements to be considered, at ARB's sole discretion, should there be remaining funding available after the highest scoring project(s) has/have been selected. The optional minimal project proposal must be sent together with the main project application but must be a separate, stand-alone application in a separate sealed envelope labeled "Optional Minimal Project Application". The optional minimal project application must include an associated work plan, budget, emission reductions and cost-effectiveness calculations, and all other required elements listed in Section XII (incomplete applications will not be considered for scoring). One (1) signed original, four (4) copies, and one (1) CD of the application and all of the required documents must also be submitted. Scoring for the optional minimal projects will only occur in the event the remaining funds are not enough to be awarded to the next highest scored project. Scoring for optional minimal project proposals will be accomplished in the same manner as for all other applications, and only applications submitted for optional minimal projects that have budgets at or below the remaining level of funding will compete. An applicant's minimal project proposal will only be eligible for consideration if the main project was not selected for funding.

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	10
6	Cost-Effectiveness	5
7	Vehicle Daily Range	10
8	Technology and Innovation	10
9	Potential for Market Penetration and Commercialization of the Technology	15
10	Application Completeness	5
11	Timeline for Project Completion	5
	TOTAL	100

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 3.

1. Applicant Qualifications (Appendix A, Attachment 1) – 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 on-road vehicle 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 drayage trucks to be used in the project, the technology demonstrator(s), and the Grantee 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, project planning, field demonstration, and data collection and reporting.

- 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 ability to administer similar air quality programs.

- Describe the project team's relationship and degree of collaboration with vehicle and charging/refueling infrastructure builders and technology demonstrator(s) on the proposed project. Describe what business alliances and partnerships will be involved in commercialization.

- Performance of the Grantee, technology demonstrator(s), and third-party contractors with previous AQIP projects will also be considered.

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

- Provide a concise statement of how the project meets ARB's goal under the Zero-Emission Drayage Truck Demonstration Project Solicitation and the FY 2014-15 Funding Plan.

- In a logical sequence, describe the tasks necessary to prepare for and conduct a practical demonstration of the innovative technology(ies). 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. Projects should contain a two-phase staggered drayage truck deployment as explained in Section X, Scope of Work. Identify what entity (Grantee or industry partner) 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.

- 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 and at what amounts.

- Identify the entities that will be using the vehicles included in the project and how the Grantee will ensure data will be reported as required to ARB or the ARB-designated third-party data analysis provider.

- Identify the resources (e.g., equipment, machine and electronic shops, field and laboratory facilities, materials, etc.) to be used at each performance site listed. 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 your organization and explain why it cannot be used.

- Identify any fueling, charging, or other related infrastructure already in place that will be utilized 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 fleet. 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 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.

Applicants will be evaluated based on the project's goals relative to this Solicitation, the completeness of their plan for implementing the project, and the ability to complete the work in a timely manner. The Project Narrative and Work Plan must address how the applicant will implement all of the tasks in the proposed scope of work.

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 5). Administrative fees may not exceed 5 percent of the total amount awarded by ARB.

- Indicate the source of funding 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.

- Demonstrate that the Grantee and/or technology demonstrator(s) will be financially capable of providing the minimum 25 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. In-kind contributions refer to goods or services contributed by the Grantee, technology provider, end-user, or third party, but not charged to the project amount. Cash contributions refer to monetary funds contributed by the Grantee, technology provider, end user, or other third party to fund the project.

- 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.

- For each demonstration vehicle (and each baseline vehicle or equipment, if applicable), include $2,000 in the budget for the purchase of data collection equipment.

- Attach Letter(s) of Commitment from each third party (i.e., a party other than the organization submitting the application) 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 10 Points

- Describe in Appendix A, Attachment 4 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 CO_2 equivalent[7] reduced per year.

- **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.

6. Cost-Effectiveness – Maximum 5 Points

- Describe in Appendix A, Attachment 4 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 CO_2 equivalent) reduced for the two scenarios below, using the methodology in Appendix D:

    - during the actual proposed project over a 2-year demonstration; and
    - once deployed into the marketplace, one year post proposed demonstration.

7. Vehicle Daily Range – Maximum 10 Points

- Describe what the expected daily vehicle range in miles and daily zero-emission range in miles is expected to be. Projects that can meet the 200-mile total daily range goal and 100-mile zero-emission daily range goal will receive the full allocation of points for this criterion. If projects propose daily vehicle

[7] "CO_2 equivalent" means the number of metric tons of CO_2 emissions with the same global warming potential as one metric ton of another greenhouse gas.

mile ranges that are less than the daily range goals expressed above, points will be awarded as follows:

- Total daily vehicle ranges less than 200 miles per day will be divided by 200 miles per day and multiplied by 5 points to give the prorated number of points associated with the total daily range.
- Daily zero-emission mile ranges less than 100 miles per day will be divided by 100 miles per day and multiplied by 10 points to give the prorated number of points associated with the total daily zero-emission mile range.
- Projects that have more than 200 miles in total daily range and more than 100 miles of total daily zero-emission range will be awarded the maximum number of points allowed under this scoring criterion.

If ARB during its review, determines that the expected ranges for drayage trucks in the application are not credible, fewer points may be awarded.

8. Technology and Innovation – Maximum 10 points

- Identify and describe the technological innovation that is the basis for the project. If the proposed technology is a component of a device or process, also describe the device or process. 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 vehicles: during operations, battery charging, refueling, equipment maintenance, and other operational parameters. Identify any specific issues that first responders, such as firefighters, police, etc., should be concerned with if an emergency is encountered, either due to internal or external forces, with vehicles and EVSE/refueling equipment funded under this demonstration.

- Explain the technical advantages of the innovation, 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 15 points

- Define target markets and explain why the targeted industries would buy the innovation after a successful demonstration project. Both markets within and outside of California should be considered.

- Describe the recent and expected growths or declines of the targeted industries.

- Identify the specific market niche 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 technology(ies).

- Describe what steps will be followed to gain ARB certification or verification of the proposed technology(ies).

- Describe the economic benefits that a California business could expect if they operated zero- or near-zero emission vehicles that are part of this demonstration.

- Describe any special training that will be required for installation and maintenance personnel.

10. 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 demonstration have read the Sample Grant Agreement that is included in this Solicitation packet as Appendix B.

11. 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 3). 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 work will be accomplished by April 15, 2019.

XVI. GRANTEE SELECTION

The successful Grantee will be required to sign a Grant Agreement with ARB to fulfill the administrative duties and technical duties associated with the project (see

Appendix B, Sample Grant Agreement).[8] Signed grant agreements and approved governing board resolutions must be returned to ARB 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, ARB, 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 ARB'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 demonstrator will be required to be made, and funding can be directed to another project identified in the Funding Plan as needed.

ARB, 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.

XVII. IMPLEMENTATION PROCESS

Meetings

Before work begins, a kick-off meeting will be held in Sacramento between the Grantee, the technology demonstrator(s), third-party data analysis provider (if determined), and ARB project management staff (a separate kick-off meeting with the third-party data analysis provider may be required). 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 ARB-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 ARB 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;

[8] 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 ARB is serving as lead CEQA agency, the applicant must submit any required final CEQA documents by December 1, 2015 (prior to execution of the Grant Agreement). If an applicant fails to meet this requirement, ARB may deny the grant application. ARB will independently review any CEQA documentation provided by the applicant. ARB may modify any Grant Agreement based upon information produced from the CEQA environmental review process. If ARB in its sole discretion finds a project's CEQA documentation inadequate, ARB 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.

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

Project Funding Procedure

In order to receive a disbursement, the Grantee must submit a grant disbursement request to ARB. The Grant Disbursement Request Form (Appendix B, Exhibit C) must be signed by the party authorized and designated in the Grant Agreement and must include all information to substantiate the eligibility of costs to be reimbursed. GGRF grant funds will only be issued for vehicles, equipment, and services 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 for which the disbursement request is requesting reimbursement, is required for all disbursement requests. The advance of grant funds will not be allowed.

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

Reporting and Monitoring Requirements

The Grantee must submit numbered status reports accompanying grant disbursement requests to ARB at least every three months, but may submit on a monthly basis if necessary for more frequent invoicing with prior approval from ARB. These reports must be approved by ARB 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, as deemed necessary by ARB or its designated third-party data analysis provider;

- 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; and
- An update on the commercialization prospects.

Final reports will be made public and posted on ARB's AQIP website. Requests for additional information may be required by ARB, 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 ARB's Project Liaison. Any supporting documentation sent to ARB, U.S. EPA, or any other government agency granting certification or verification, must be concurrently submitted to the AQIP Project Liaison assigned to the project, as identified in the Grant Agreement (see Appendix B).

Any change in the project budget, re-definition of deliverables, or extension of the project schedule must be approved in advance and in writing by the ARB Project Liaison and may require an amendment. Once a grant is in place, minor changes to the work to be done or other project scope changes may be considered by ARB, in consultation with the Grantee or technology demonstrator(s). ARB reserves the right to terminate a grant if ARB determines, in its sole discretion, that the objectives cannot be reached or that the Grantee, technology demonstrator(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 demonstrator(s) must allow ARB, 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 ARB staff or its designee deem necessary.