

State of California
CALIFORNIA AIR RESOURCES BOARD
EXECUTIVE ORDER G-24-040

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorizes the California Air Resources Board (CARB or Board) to adopt standards, rules, and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, section 39003 of the Health and Safety Code charges the Board with coordinating efforts to attain and maintain ambient air quality standards, to conduct research into the causes of and solution to air pollution, and to systematically attack the serious problem caused by motor vehicles, which is the major source of air pollution in many areas of the State;

WHEREAS, sections 39666 and 39667 of the Health and Safety Code authorize the Board to adopt regulations and measures to reduce emissions of toxic air contaminants from vehicular and non-vehicular sources;

WHEREAS, Chapter 3.2 commencing with section 39625 of the Health and Safety Code established the Proposition 1B: Goods Movement Emission Reduction Program (Program) to implement the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, also known as Proposition 1B, which authorizes one billion dollars (\$1,000,000,000) in bond-funded incentives for CARB to reduce emissions associated with the movement of freight along California's trade corridors;

WHEREAS, section 39625.5(b)(1) of the Health and Safety Code requires the Board to allocate funds to local agencies in a manner that gives priority to emissions reduction projects that achieve the earliest possible reduction of health risk in communities with the highest health risks from goods movement facilities;

WHEREAS, in Resolution 08-12 adopted on February 28, 2008, the Board adopted the Proposition 1B: Goods Movement Emission Reduction Program Guidelines for Implementation;

WHEREAS, in Resolution 15-20 adopted on June 25, 2015, the Board adopted updated Final 2015 Guidelines for Implementation (Program Guidelines);

WHEREAS, in Resolution 10-18, adopted on March 25, 2010, the Board delegated to the Executive Officer, or his or her designee, the authority to recapture funds previously awarded by the Board to a local or State agency for reallocation and expenditure, according to the terms and conditions stated in the Program Guidelines (recapture provisions). The CARB Executive Officer, or his or her designee, may amend or modify an impacted grant or interagency agreement or establish a new grant or interagency agreement to implement this policy, consistent with the Program Guidelines;

WHEREAS, in Resolution 10-27 adopted on June 24, 2010, the Board delegated authority to the Executive Officer, and his or her designee, to select the projects to be funded from any recaptured funds to Board-approved primary or backup projects consistent with Program funding priorities and to enter into grant agreements with the local agencies;

WHEREAS, in Resolution 13-34 adopted on July 25, 2013, the Board directed CARB staff to closely monitor local agency implementation of grant agreements to ensure funds are being used effectively and expeditiously, and to implement the recapture provisions stated in the Program Guidelines if CARB staff believes that the grants cannot be fully utilized by the specified deadlines;

WHEREAS, in Resolution 10-18, the Board affirmed the existing authority of CARB staff to interpret or clarify the Program Guidelines and delegated to the Executive Officer, or his or her designee, the authority to adopt changes to the Program Guidelines that he or she deems necessary to enable effective implementation of the Program, provided that such changes are consistent with statute and the goals established by the Board, and such modifications are identified in Attachment A;

WHEREAS, the local agencies solicited applications for equipment projects for all source categories, during multiple solicitations, pursuant to the procedures stated in the Program Guidelines, and funds remain available for additional projects;

WHEREAS, CARB staff worked with the local agencies to modify existing project specifications and requirements to provide additional opportunities for funding for the locomotives as identified in Attachment A;

NOW, THEREFORE, IT IS ORDERED that pursuant to the delegation of authority by the Board in Resolution 10-18, the Executive Officer, or his or her designee, hereby adopts the modifications to the Program Guidelines shown in Attachment A.

Executed at Sacramento, California this 29th day of February 2024.



Heather Arias, Chief, Transportation and Toxics Division

ATTACHMENT A

Changes to Proposition 1B: Goods Movement Emission

Reduction Program Guidelines

I. LIMITED CHANGES TO THE PROGRAM GUIDELINES FOR SOLICITATIONS OPENED AFTER EXECUTION OF EXECUTIVE ORDER G-24-040

A. Specifications

1. Locomotives - See Appendix B
 - Project Options. Include options for funding zero emission switcher and medium horsepower locomotives. These project options may be eligible for funding up to 75% of total eligible costs.
 - Infrastructure Funding. Zero emission switcher and medium horsepower locomotives may be eligible for up to \$250,000 for the purchase of associated charging or fueling infrastructure per project.
 - Minimum Project Life. Reduce minimum project life eligibility requirements for zero emission switcher and medium horsepower locomotives from 15 years to 10 years.

February 2024 and Later Locomotives and Railyard Solicitations
Appendix B: Locomotives and Railyards

APPENDIX B: Locomotives and Railyards

A. Equipment Project Specifications

Locomotive Projects	
Eligible Equipment	Diesel-powered freight locomotives with no or minimal emissions control technology (i.e., uncontrolled, or meeting Tier 0 through Tier 2 standards)
General Requirements (applicable to all project options).	<p>Equipment owner must demonstrate:</p> <ul style="list-style-type: none"> • Operation or equivalent locomotive horsepower operation in California for the past 2 years. • For switchers and medium horsepower locomotives: at least 50% operation or equivalent locomotive horsepower operation within the four California trade corridors for the past 2 years. • For line haul locomotives: a majority of the minimum percentage operation or equivalent locomotive horsepower operation within the four California trade corridors for the past 2 years. • Estimated diesel fuel usage of 20,000 gallons or equivalent per year or greater for Class I or Class II railroads. • Estimated diesel fuel usage of 5,000 gallons or equivalent per year or greater for Class III railroads. <p>Locomotive emissions capture and control system projects</p> <p>Existing freight railyards within the four California trade corridors</p> <p>Equipment owner shall:</p> <ul style="list-style-type: none"> • Commit to the project life specified by the applicable equipment project option. • Adhere to all Program requirements during the project life. • Agree to equipment inspections. • Comply with record-keeping, reporting, and Program review or fiscal audit requirements. • Sign a legally binding contract with the local agency including project milestones and completion deadlines.

Locomotive Projects

- Properly maintain upgraded equipment in good operating condition and according to manufacturer's recommendations.
- Demonstrate proof of equipment warranty and insurance on upgraded equipment.
- Certify that there are no outstanding CARB violations or non-compliance with CARB regulations associated with the equipment or the owner.
- Exclude any Program-funded equipment from the compliance calculations for the 1998 agreement for locomotives operating in the South Coast Air Basin for the duration of the project life (applicable to Union Pacific and BNSF Railway only).

Locomotives and Railyards (cont.)

<p>Option (1): Switcher Locomotive (1,006 hp 2,300 hp) Funding Options</p>	<p>Partial funding (see options below) to replace or retrofit (retrofit Includes rebuild, repower, remanufacture, filter installation, and all other modifications other than replacement) an uncontrolled, or Tier 0 through Tier 2 switcher locomotive with a new engine or alternative technology that meets U.S. EPA Tier 4 or lower emission standards (1.30 grams per brake horsepower-hour (g/bhp-hr) or lower NOx and 0.03 g/bhp-hr or lower PM).</p> <p>For Class I, Class II, and Class III Railroads with minimum usage of 20,000 gallons/year, partial funding up to 75% of eligible costs or \$1,875,000*, whichever is lower, to replace or retrofit a switcher locomotive with a new engine or alternative technology.</p> <p>For Class III Railroads with minimum usage of 5,000 to 19,999, partial funding up to 75% of eligible costs or \$937,500*, whichever is lower, to replace or retrofit a switcher locomotive.</p> <p>*If the equipment is banned from California operation instead of scrapped, the funding amount is reduced by 20%.</p> <p>Eligible costs may include a new chassis, freshly manufactured or retrofitted engine(s), new generator set(s), filter and diesel oxidation catalyst for PM control, exhaust gas recirculation and selective catalytic reduction device for NOx control, other emission control equipment, and new or upgraded mechanical/electrical/control system components necessary for safe operation.</p> <p>Ineligible costs include auto start/stop devices required by regulation or agreements, GPS devices and associated monitoring and reporting costs, design, engineering, consulting, license, registration, taxes, insurance, operation, maintenance, and repair.</p>
<p>Requirements</p>	<p>The new or upgraded equipment must meet the required emission levels or standards as evidenced by a U.S. EPA Certificate of Conformity (if available) and a CARB Verification Letter of the emission levels achieved.</p> <p>In addition to the General Requirements, equipment owner shall:</p> <ul style="list-style-type: none"> • Commit to 90% or 100% California-only operation for the duration of the project life equipment is permitted to temporarily travel out-of-state for periodic maintenance, if outlined in the contract between the local agency and equipment owner.

	<ul style="list-style-type: none">• Commit to at least 50% of operation within the four California trade corridors for duration of the project life.• Commit to a project life of 15 years.• Commit to the funded locomotive using California CARB diesel fuel unless CARB approves an exemption and it is included in the contract between the local agency and equipment owner.• Scrap the old engine/locomotive, or ban old engine/locomotive from California operation (replacements and retrofits involving engine replacement).• Install an active GPS device on both the old equipment (if not scrapped) and the new equipment, fund and commit to data collection, and report location data.
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Locomotives and Railyards (cont.)

<p>Option (2): Zero Emission Switcher Locomotive (1,006 hp 2,300 hp) Funding Options</p>	<p>Partial funding (see options below) to replace or retrofit (retrofit includes rebuild, repower, remanufacture, and all other modifications other than replacement) an uncontrolled, or Tier 0 through Tier 2 switcher locomotive with a zero emission locomotive.</p> <p>For Class I, Class II, and Class III Railroads with minimum usage of 20,000 gallons/year, partial funding up to 75% of eligible costs* to replace or retrofit a switcher locomotive with a zero emission locomotive.</p> <p>For Class III Railroads with minimum usage of 5,000 to 19,999, partial funding up to 37.5% of eligible cost* to replace or retrofit a switcher locomotive with a zero emission locomotive.</p> <p>*If the equipment is banned from California operation instead of scrapped, the funding amount is reduced by 20%.</p> <p>Eligible costs may include a new chassis, freshly manufactured or retrofitted battery system, hydrogen fuel cell system, other zero-emission system, energy storage devices (battery packs and tenders, hydrogen tank and tenders, and other energy storage components critical to the zero emission system), energy and power management system, thermal management system, traction motors, and new or upgraded mechanical/electrical/control system components necessary for safe operation.</p> <p>Ineligible costs include auto start/stop devices required by regulation or agreements, GPS devices and associated monitoring and reporting costs, design, engineering, consulting, license, registration, taxes, insurance, operation, maintenance, and repair.</p>
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Requirements	<p>The new or upgraded zero emission equipment must be certified, verified, or approved by CARB as applicable.</p> <p>In addition to the General Requirements, equipment owner shall:</p> <ul style="list-style-type: none">• Commit to 90% or 100% California-only operation for the duration of the project life equipment is permitted to temporarily travel out-of-state for periodic maintenance, if outlined in the contract between the local agency and equipment owner.• Commit to at least 50% of operation within the four California trade corridors for duration of the project life.• Commit to a project life of 10 years.• Scrap the old engine/locomotive, or ban old engine/locomotive from California operation (replacements and retrofits involving engine replacement).• Install an active GPS device on both the old equipment (if not scrapped) and the new equipment, fund and commit to data collection, and report location data.
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<p>Option (3): Tier 4 or Zero Emission Rail Car Mover For Class III Railroads Only Funding Options</p>	<p>Partial funding (see options below) to replace an uncontrolled, or Tier 0 through Tier 2 switcher locomotive with a new Tier 4 or Zero emission rail car mover.</p> <p>Note: Zero emission rail car movers or similar rail vehicle used for rail switching operations must be able to satisfy current operational needs being performed by the existing equipment that is being replaced.</p> <table border="0"> <thead> <tr> <th data-bbox="414 535 576 569"><u>Equipment</u></th> <th data-bbox="987 535 1239 569"><u>Funding Amount</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="414 596 704 667">Tier 4 rail car mover eligible cost</td> <td data-bbox="987 596 1321 630">50% up to \$250,000 of</td> </tr> <tr> <td data-bbox="414 695 824 766">Zero emission rail car mover eligible cost</td> <td data-bbox="987 695 1321 728">75% up to \$500,000 of</td> </tr> </tbody> </table> <p>Eligible costs may include the purchase of a new rail car mover.</p> <p>Ineligible costs include auto start/stop devices required by regulation or agreements, design, engineering, consulting, license, registration, taxes, insurance, operation, maintenance, and repair.</p> <p>*If the equipment is banned from California operation instead of scrapped, the funding amount is reduced by 20%.</p>	<u>Equipment</u>	<u>Funding Amount</u>	Tier 4 rail car mover eligible cost	50% up to \$250,000 of	Zero emission rail car mover eligible cost	75% up to \$500,000 of
<u>Equipment</u>	<u>Funding Amount</u>						
Tier 4 rail car mover eligible cost	50% up to \$250,000 of						
Zero emission rail car mover eligible cost	75% up to \$500,000 of						

Requirements	<p>For diesel equipment, the new equipment must be certified or verified and meet the U.S. EPA Tier 4 emission level standard. For zero emission equipment, the new equipment must be certified, verified, or approved by CARB as applicable.</p> <p>The rail car mover must perform the same work and meet the operation needs of the existing locomotive. Metrics for determining “work” include, but are not limited to, duty cycle, tractive effort or pulling force (drawbar force).</p> <p>In addition to the General Requirements, equipment owner shall:</p> <ul style="list-style-type: none">• Commit to 90% or 100% California-only operation for the duration of the project life; equipment is permitted to temporarily travel out-of-state for periodic maintenance, if outlined in the contract between the local agency and equipment owner.• Commit to at least 50% of operation within the four California trade corridors for duration of the project life.• Commit to a project life of 15 years.• Scrap the old engine and any other parts or components that produces emissions, or ban old engine/locomotive from California operation (replacements and retrofits involving engine replacement).• Install an active GPS device on both the old equipment (if not scrapped) and the new equipment, fund and commit to data collection, and report location data.
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Locomotives and Railyards (cont.)

<p>Option (4): (Medium Horsepower) Locomotive (2,301 hp 4,000 hp)) Funding Options</p>	<p>Partial funding (see options below) to replace or retrofit (retrofit Includes rebuild, repower, remanufacture, filter installation, and all other modifications other than replacement) an uncontrolled, Tier 0 through Tier 2 medium horsepower locomotive with a new engine or alternative technology that meets U.S. EPA Tier 4 or lower emission standards (1.30 g/bhp-hr or lower NOx and 0.03 g/bhp-hr or lower PM).</p> <p>For Class I, Class II, and Class III Railroads with minimum usage of 20,000 gallons/year, partial funding up to 75% of eligible costs or \$2,250,000*, whichever is lower, to replace or retrofit a medium horsepower locomotive with a new engine or alternative technology.</p> <p>For Class III Railroads with minimum usage of 5,000 to 19,999, partial funding up to 75% of eligible costs or \$1,125,000*, whichever is lower, to replace or retrofit a medium horsepower locomotive.</p> <p>*If the equipment is banned from California operation instead of scrapped, the funding amount is reduced by 20%.</p> <p>Eligible costs may include a new chassis, freshly manufactured or retrofitted engine(s) new generator set(s), filter and diesel oxidation catalyst for PM control, exhaust gas recirculation and selective catalytic reduction device for NOx control, other emission control equipment, and new or upgraded mechanical/electrical/control system components necessary for safe operation.</p> <p>Ineligible costs include auto start/stop devices required by regulation or agreements, GPS devices and associated monitoring and reporting costs, design, engineering, consulting, license, registration, taxes, insurance, operation, maintenance, and repair.</p>
<p>Requirements</p>	<p>The new or upgraded equipment must meet the required emission levels or standards as evidenced by a U.S. EPA Certificate of Conformity (if available) and a CARB Verification Letter of the emission levels achieved.</p> <p>In addition to the General Requirements listed previously, equipment owner shall:</p> <ul style="list-style-type: none"> • Commit to 90% California or 100% California-only operation for the duration of the project life; equipment is permitted to temporarily travel out-of-state for periodic maintenance, if

	<p>outlined in the contract between the local agency and equipment owner.</p> <ul style="list-style-type: none">• Commit to at least 50% of operation within the four California trade corridors for the duration of the project life.• Commit to a project life of 15 years.• Commit to the funded locomotive using California CARB diesel fuel unless approves an exemption and it is included in the contract between the local agency and equipment owner.• Scrap or ban the old engine/locomotive from California operation (replacements and retrofits involving engine replacement). <p>Install an active GPS device on both old (if not scrapped) and new equipment, fund and commit to data collection, and report location data.</p>
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<p>Option (5): (Medium Horsepower) Zero Emission Locomotive (2,301 hp 4,000 hp)) Funding Options</p>	<p>Partial funding (see options below) to replace or retrofit (retrofit includes rebuild, repower, remanufacture, and all other modifications other than replacement) an uncontrolled, Tier 0 through Tier 2 medium horsepower locomotive with a zero emission locomotive.</p> <p>For Class I, Class II, and Class III Railroads with minimum usage of 20,000 gallons/year, partial funding up to 75% of eligible costs* to replace or retrofit a medium horsepower locomotive with a zero emission locomotive.</p> <p>For Class III Railroads with minimum usage of 5,000 to 19,999, partial funding up to 37.5% of eligible cost* to replace or retrofit a medium horsepower locomotive with a zero emission locomotive.</p> <p>*If the equipment is banned from California operation instead of scrapped, the funding amount is reduced by 20%.</p> <p>Eligible costs may include a new chassis, freshly manufactured or retrofitted battery system, hydrogen fuel cell system, other zero-emission system, energy storage devices (battery packs and tenders, hydrogen tank and tenders, and other energy storage components critical to the zero emission system), energy and power management system, thermal management system, traction motors, and new or upgraded mechanical/electrical/control system components necessary for safe operation.</p> <p>Ineligible costs include auto start/stop devices required by regulation or agreements, GPS devices and associated monitoring and reporting costs, design, engineering, consulting, license, registration, taxes, insurance, operation, maintenance, and repair.</p>
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<p>Requirements</p>	<p>The new or upgraded zero emission equipment must be certified, verified, or approved by CARB as applicable.</p> <p>In addition to the General Requirements listed previously, equipment owner shall:</p> <ul style="list-style-type: none"> • Commit to 90% California or 100% California-only operation for the duration of the project life; equipment is permitted to temporarily travel out-of-state for periodic maintenance, if outlined in the contract between the local agency and equipment owner. • Commit to at least 50% of operation within the four California trade corridors for the duration of the project life. • Commit to a project life of 10 years. • Commit to the funded locomotive using California CARB diesel fuel unless approves an exemption and it is included in the contract between the local agency and equipment owner. • Scrap or ban the old engine/locomotive from California operation (replacements and retrofits involving engine replacement). <p>Install an active GPS device on both old (if not scrapped) and new equipment, fund and commit to data collection, and report location data.</p>
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Locomotives and Railyards (cont.)

<p>Option (6): Line-Haul Locomotive (4,001 hp or higher) Funding Options</p>	<p>Partial funding (see options below) to replace or retrofit (retrofit includes rebuild, repower, remanufacture, filter installation, and all other modifications other than replacement) an uncontrolled, Tier 0 through Tier 2 line-haul locomotive with a new engine or alternative technology that meets U.S. EPA Tier 4 or lower emission standards (1.30 g/bhp-hr or lower NOx and 0.03 g/bhp-hr or lower PM).</p> <table border="0" data-bbox="391 562 1494 756"> <thead> <tr> <th data-bbox="391 562 876 598"><u>California Operation</u></th> <th data-bbox="876 562 1494 598"><u>Funding Amount*</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="391 598 876 634">90% to 100%</td> <td data-bbox="876 598 1494 634">75% up to \$2,250,000</td> </tr> <tr> <td data-bbox="391 634 876 669">75%</td> <td data-bbox="876 634 1494 669">60% up to \$1,800,000</td> </tr> <tr> <td data-bbox="391 669 876 705">50%</td> <td data-bbox="876 669 1494 705">35% up to \$1,050,000</td> </tr> <tr> <td data-bbox="391 705 876 756">30%</td> <td data-bbox="876 705 1494 756">15% up to \$450,000</td> </tr> </tbody> </table> <p data-bbox="391 777 1494 850">*If the equipment is banned from California operation instead of scrapped, the funding amount is reduced by 20%.</p> <p data-bbox="391 871 1494 1102">Eligible costs may include a new chassis, freshly manufactured or retrofitted engine(s), new generator set(s), filter and diesel oxidation catalyst for PM control, exhaust gas recirculation, and selective catalytic reduction device for NOx control, other emission control equipment, and new or upgraded mechanical/electrical/control system components necessary for safe operation.</p> <p data-bbox="391 1123 1494 1299">Ineligible costs include auto start/stop devices required by regulation or agreements, GPS devices and associated monitoring and reporting costs, design, engineering, consulting, license, registration, taxes, insurance, operation, maintenance, and, and repair.</p>	<u>California Operation</u>	<u>Funding Amount*</u>	90% to 100%	75% up to \$2,250,000	75%	60% up to \$1,800,000	50%	35% up to \$1,050,000	30%	15% up to \$450,000
<u>California Operation</u>	<u>Funding Amount*</u>										
90% to 100%	75% up to \$2,250,000										
75%	60% up to \$1,800,000										
50%	35% up to \$1,050,000										
30%	15% up to \$450,000										

Requirements	<p>The new or upgraded equipment must meet the required emission standards as evidenced by a U.S. EPA Certificate of Conformity (if available) and a CARB Verification Letter of the emission levels achieved.</p> <p>In addition to the General Requirements listed previously, equipment owner shall:</p> <ul style="list-style-type: none"> • Commit to a minimum percentage of California operation per the appropriate funding level for the duration of the project life. Equipment is permitted to temporarily travel out-of-state for periodic maintenance, if outlined in the contract between the local agency and equipment owner. • Commit to at least a majority of the percentage California operation being within the four California trade corridors for the duration of the project life. • Commit to a project life of 15 years. • Commit to the funded locomotive only using California CARB diesel fuel unless CARB approves an exemption and it is included in the contract between the local agency and equipment owner. • Scrap or ban the old (uncontrolled through Tier 1+) engine/locomotive from California operation for (replacements or retrofits involving engine replacement) If upgrading a Tier 2 engine/locomotive, the Tier 2 equipment may remain in California and a Tier 0 through Tier 1+ engine/locomotive must be scrapped or banned from California operation (replacements and retrofits involving engine replacement). <p>Install an active GPS device on both the old (if not scrapped) and the new equipment, fund and commit to data collection, and report location data</p>
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Locomotives and Railyards (cont.)

<p>Option (7): Locomotive Emissions Capture and Control System</p>	<p>Partial funding for the lower of 80% of eligible costs or a level commensurate with a cost effectiveness of at least 0.10 pounds of weighted emissions reduced per State dollar invested for the purchase and installation of a CARB-approved locomotive emission capture and control system (a.k.a. hood or bonnet) to reduce diesel PM and NOx emissions from freight locomotives.</p> <p>Eligible costs include the purchase and installation of the emission treatment system and ducting, and hoods/bonnets necessary to connect to locomotives.</p> <p>Ineligible costs include those associated with increasing the capacity of electrical power transmission to the facility, locomotive modifications to accept capture and control system, locomotive or other acquisition and modification for a portable system, design, engineering, consulting, environmental review, legal fees, permits, licenses and associated fees, taxes, utility construction or metered costs, insurance: operation, maintenance, and repair.</p>
<p>Requirements</p>	<p>In addition to the General Requirements listed previously, equipment owner shall:</p> <ul style="list-style-type: none"> • Commit to 100% operation within the four California trade corridors for the duration of the project life • Commit to a project life of 10 years. • Document the system is commercially available and achieves an overall capture and control efficiency rate of at least 80% for the removal of NOx and PM. • Demonstrate system performance and efficiency with source testing prior to funding and annually thereafter by capturing emissions from an operating locomotive undergoing diagnostic procedures. <ul style="list-style-type: none"> ○ Performance measures include: (i) no visible emissions after bonnet is connected to the locomotive (opacity <20%); and (ii) establish overall system efficiency rate is at least 80% using CARB approved methods for flow rate (Methods 1 to 4), NOx (CARB Method 100) and PM (CARB Method 5). Any alternative test methods must be approved by CARB • Obtain a 10-year manufacturer's warranty (including labor and materials) to repair and/or replace system component(s) as needed to correct any mechanical electrical or control system equipment or installation problems, which may cause significant loss of capture, treatment efficiency or usability. The manufacturer's warranty may

	<p>exclude minor items that are subject to normal wear and tear if approved by CARB</p> <ul style="list-style-type: none"> • Comply with all local permitting requirements.
<p>Excluded Funding Components</p>	<ul style="list-style-type: none"> • Electricity costs required to operate the hood control system. • Other operation and maintenance costs.

Locomotives and Railyards (cont.)

<p>Option (8): Electric Charging Stations or Hydrogen Fueling Units</p>	<p>Partial funding of up to \$2500,000 for the purchase of electric charging or hydrogen fueling units for a switcher or medium horsepower locomotive. Funding is in addition to the funding for the replacement or retrofit of a switcher or medium horsepower locomotive; see Options 2 or 5 (pages B-5 and B-11) for eligibility, funding options, and requirements for the locomotive replacement or retrofit.</p> <p>This funding option is only available if the equipment owner replaces or retrofits a minimum of one locomotive through the Program (Option 2 or 5 - pages B-5 and B-11).</p>
<p>Requirements</p>	<p>In addition to the General Requirements listed previously, equipment owner shall:</p> <ul style="list-style-type: none"> • Replace or retrofit a minimum of one locomotive with a zero emission locomotive (Options 2 or 5). • Meet all requirements for project Options 2 or 5. • Demonstrate proof of equipment warranty of at least 3 years. • Comply with all local permitting requirements. • Commit to a 10 year project life.

A. Major Milestones for Project Completion

- Equipment order.
- Equipment acquisition/installation.
- Submittal of invoice to local agency for reimbursement.

B. Application Information

- Equipment owners shall provide the following information and documentation in addition to the requirements described in Chapter VI., and other information CARB or local agencies may request on the equipment project applications.
- Union Pacific and BNSF Railway must certify that any locomotive that would operate in the South Coast Air Basin will be excluded from the railroads fleet average emissions calculations under the 1998 agreement.

1. General information

This section applies to all equipment project options.

- Organization/agency/company name.
- Railroad Class (1, 2, or 3).
- Mailing address.
- Primary contact name and phone number.
- Person with equipment contract signing authority (owner).
- Proof of identity of equipment owner.
- Business information.
 - Number of locomotives.
 - Number of employees.

2. Current equipment and activity information

a) Switcher, medium horsepower, and line-haul locomotive

- Existing locomotive information.
 - Locomotive type (diesel/electric, alternative technology).
 - Build number and build date.
 - Builder.
 - Locomotive make, model, and serial number.

- Engine data (per engine).
 - Engine configurations (roots blown, turbo-charged, other).
 - Emission control level (uncontrolled, Tier 0 through Tier 2).
 - Engine family, make and type, model and engine year.
 - Serial number.
 - Horsepower.
 - Number of cylinders.
 - Fuel type.
 - Electronic monitoring unit device type and model (if equipped).
 - Ownership.
 - Documentation of current ownership.
 - Activity data for the past 2 years (for existing unit or units of comparable horsepower and function).
 - Annual fuel consumption (gallons of fuel) or annual megawatt hours of operation.
 - Name and location of home railyard.
 - Activity documentation for past 2 years (for existing unit or units of comparable horsepower and function).
 - Documentation of percentage of operation within the four California trade corridors.
 - Identify in which of the four California trade corridors the equipment is routinely operated.
 - Documentation of fuel consumption.
 - Documentation of megawatt hours of operation.
 - CARB staff may post on the program website additional instructions for applicants demonstrating eligibility based on units of comparable horsepower and function.
- b) Locomotive emissions and capture control system*
- Facility location.
 - Address of railyard where technology will be installed.

- Description and area map of railyard facility where system is proposed for installation.
- Railyard activity.
 - Quantification of current annual locomotive maintenance and diagnostic operations at the area within facility where infrastructure is proposed.
 - Number and type of units being serviced.
 - For each type of unit being serviced, provide average time spent in idling and on each notch level while being serviced or in diagnostics.
- Baseline emissions (without the project in place) for the 10 years of operation of the system. This baseline should reflect the benefits of all adopted regulations, MOU agreements, and any other enforceable agreements.

Additional documentation may be requested by the local agency.

3. Proposed equipment project information

a) Switcher locomotive and rail car mover

- New switcher or rail car data.
 - Locomotive/rail car type (diesel-electric, gen-set, alternative technology, zero emission).
 - Builder name.
 - Locomotive or rail car mover make.
 - Locomotive or rail car mover family name.
 - For locomotive, U.S. EPA Certificate of Conformity (if available) and/or a CARB Verification Letter of the emission levels achieved.
 - For Tier 4 rail car mover, U.S. EPA Certificate of Conformity, or CARB certification and /or CARB Verification of the emission levels achieved.
 - For zero emission switcher or rail car mover, CARB certification, verification or approval.
 - Equipment Identification number (EIN), if applicable.
 - Engine data (per engine).
 - Engine configurations (roots blown, turbo-charged, other).
 - Engine family, make, and engine year.
 - Horsepower.
 - Number of cylinders.

- For new switcher gen-sets, provide the number of engines, and each engine horsepower and kilowatts-hour.
 - Fuel type.
- Zero emission switcher or rail car mover engine data.
 - Fuel type.
 - Engine family, make, model and engine year.
 - Serial number.
 - Horsepower or kilowatt-hours.
 - Rated output (voltage and amperage) of battery packs, fuel-cell stacks, and electric motors, as applicable.
 - Estimated operating time (or other work metric) per complete charge (as applicable).
- Emission control equipment installed, if applicable (i.e., diesel PM filter, diesel oxidation catalyst, exhaust gas recirculation, selective catalytic reduction, etc.).
- Electronic monitoring device unit type and a description or sample of the type/format of reportable data.
- Zero emission switcher or rail car mover duty cycle and/or tractive effort or pulling force (drawbar force).
- Itemized cost information for eligible expenses.
 - Locomotive, engine, or generator set (as applicable) or cost of rail car mover.
 - Emission control equipment (as applicable).
 - Other equipment/materials.
- Predicted activity data with new equipment.
 - Specify the percentage of future operation in California (90% or 100%).
 - Specify the percentage of future operation in the four California trade corridors.
 - Estimated annual fuel consumption (gallons of fuel) or estimated annual megawatt hours of operation (as applicable).
 - Name and location of home railyard.
- Equipment project funding demonstration.

- Program funds requested.
 - Funding sources and amounts of other funding (private, local, other State, federal).
 - Total project cost (Program funds requested plus other match funding).
 - Documentation of match funding availability, if requested by the local agency at the time of application.
- b) Medium horsepower and line-haul locomotive*
- New locomotive or engine data.
 - Locomotive type (diesel-electric, gen-set, alternative technology).
 - Builder name.
 - Locomotive make.
 - U.S. EPA Certificate of Conformity (if available) and a CARB Verification Letter of the emission levels achieved.
 - For zero emission locomotive, CARB certification, verification or approval.
 - Engine data (per engine).
 - Engine configurations (roots blown, turbo-charged, other).
 - Engine family, make, and engine year.
 - Horsepower.
 - Number of cylinders.
 - For new gen-sets, provide the number of engines and each engine horsepower and kilowatts-hour.
 - Fuel type.
 - Zero emission locomotive engine data.
 - Fuel type.
 - Engine family, make, model and engine year.
 - Serial number.
 - Horsepower or kilowatt-hours.
 - Rated output (voltage and amperage) of battery packs, fuel-cell stacks, and electric motors, as applicable.
 - Estimated operating time (or other work metric) per complete charge (as applicable). Emission control equipment installed, if applicable (diesel PM

- filter, diesel oxidation catalyst, exhaust gas recirculation, selective catalytic reduction, etc.).
- Electronic monitoring device unit type and a description or sample of the type/format of reportable data.
- Zero emission locomotive duty cycle and/or tractive effort or pulling force (drawbar force).
- Itemized cost information for eligible expenses.
 - Locomotive or engine (as applicable).
 - Emission control equipment (as applicable).
 - Other equipment/materials.
- Predicted activity data with new equipment.
 - Specify the percentage of future operation in California (90 or 100 percent for medium horsepower locomotives and 30 to 100 percent for line-haul locomotives).
 - Estimated annual fuel consumption (gallons of fuel) or estimated annual megawatt hours of operation (as applicable).
 - Name and location of home railyard.
- Equipment project funding demonstration.
 - Funding sources and amounts of other funding (private, local, other State, federal).
 - Total project cost (Program funds requested plus other match funding).
 - Documentation of match funding availability, if requested by the local agency at the time of application.

c) Locomotive emissions capture and control system

- Project description and design, including:
 - Number of emissions capture systems (bonnets) per unit.
 - Number of emissions treatment systems.
 - Support structure.
 - Emissions overhead manifold.
- Emission control equipment data.
 - Equipment vendor(s).

- Documentation of percent PM and NOx emission reductions.
- Itemized cost for each eligible expense.
- Predicted locomotive activity data with new system over project life.
 - Number and type of locomotive units using the hood.
 - Average time locomotives will spend under the hood idling and in notches 1-8 for each unit type identified above.
 - Power usage to run the system and source of power (grid- vs. non-grid-based).
 - Natural gas usage (if any) for heating selective catalytic reduction duct burner.
- Projected emissions and benefits with the project.
 - Emissions with the project over 10 years of operation.
 - Emission reductions attributable to the project (beyond those required by any law, regulation, or enforceable agreements) for 10 years.
 - Demonstration that the weighted emission reductions are equal to or higher than 0.10 pounds per State dollar invested.
- Equipment project funding demonstration.
 - Total project cost.
 - Program funds requested.
 - Funding sources and amounts of other funding (private, local, other State, federal).
 - Documentation of match funding availability, if requested by the local agency at the time of application.

d) Electric charging stations/Hydrogen fueling units

- Charging/fueling unit
 - New equipment information to calculate emission reductions, as determined by ARB.
 - Equipment manufacturer.
 - Equipment power rating for electric charger only (voltage, amperage, wattage, efficiency).
 - Equipment serial number.
 - Equipment recharge rate for electric charger only.
 - Anticipated cost of eligible equipment.
 - Location of construction.

- Description of usage monitoring system.
- Predicted activity rate with new equipment.
- Estimated annual truck connections to charging/fueling units and average connection time.

D. Scrap Requirements

In addition to the general scrappage requirements described in Chapter IV.A.14., specific requirements for locomotive repower and replacement projects are shown in Table B.1 below.

Table B.1 Locomotive Equipment Project Scrap Requirements

Source Category	Equipment Project Option	Additional Requirements
Locomotives	Project Options (1), (2), (3), (4), (5) and (6) Repower or Replacement	<ul style="list-style-type: none"> • The local agency shall verify the impound and transport of the old engine(s) to the dismantler up to 30 days after the new engine(s) being placed into operation (if applicable). • The dismantler must dismantle and destroy the old engine(s) within 60 days of receipt. The engine destruction must be done in accordance with these Guidelines. • The engine block shall be punctured and destroyed in such a manner to eliminate the possibility of future operation. • The dismantler shall provide proof of scrappage to the local agency within 10 days of the destruction of the engine. • The local agency or its designee must provide digital photographs, described below, showing the destruction of the old engine. The local agency must receive these photos within 10 days of the destruction of the engine. • The following digital photos must be taken and labeled for the project file: <ol style="list-style-type: none"> 1. Engine serial number either stamped on the block or on the tag. 2. Destroyed engine block.

E. Alternative to Scrapping

If the equipment owner has elected to ban the old locomotive or locomotive engine from future operation in California, the equipment owner shall demonstrate to the local agency's satisfaction that the following requirements are met for the duration of the contract:

- An active GPS device has been installed in the old equipment.
- The GPS device is fully operational and can be easily tracked.
- Provide local agency the GPS manufacturer's name, date of manufacture, and serial number of device.
- If old engine or old locomotive is remanufactured, equipment owner must provide remanufacturing date, remanufacturer's name, and sufficient information to identify remanufactured engine and (if applicable) remanufactured locomotive, including changes to emissions levels.
- If old equipment is sold, new owner must assume GPS tracking and reporting responsibilities.
- Data collection is fully funded by equipment owner.
- Report old unit future locations to local agency in the manner indicated in contract.

The old equipment, equipped with the GPS device, shall be removed from California within 60 days of receiving the fully operational upgraded equipment.

F. Post-Inspection

In addition to the general post-inspection requirements described in Chapter IV.A.16., specific requirements for locomotive post-inspections are shown in Table B.2 below.

For locomotive projects, the post-inspection shall occur within 60 days of owner receipt of fully operational equipment.

Table B.2 Locomotive Equipment Post-Inspection Requirements

Source Category	Equipment Project Option	Additional Requirements
Locomotives	Option (1), (2), (3), (4), (5) and (6) Switcher, Rail Car Mover, Medium Horsepower, and Line-Haul	<ul style="list-style-type: none"> • Locomotive engine or rail car mover must be operated under its own power under loaded conditions. • Engine make, model, engine year, and serial number for repower and replacement projects. • Start and end dates of when locomotive was repowered. • Name and address of company that repowered the locomotive engine.
	Option (7) Locomotive Emissions Capture and Control System	<ul style="list-style-type: none"> • Verify that source testing demonstrates the required capture and control efficiency. • The fully operational system must be connected to an operating locomotive and complying with performance measures stated in the specification. • Verification that the project serves the intended location.

Source Category	Equipment Project Option	Additional Requirements
	Option (8) Electric Charging Station or Hydrogen Fueling Unit	<ul style="list-style-type: none"> • Name of power system manufacturer. • Serial number and date of manufacture. • Rate amperage/voltage (electric equipment only). • Equipment recharge rate (electric equipment only). • Verification that each project's power system is operational. • Inspection shall include verification of operation by connecting locomotive to the charging/fueling unit. • Inspection shall be completed within 60 calendar days of installation of equipment.

G. Recordkeeping Requirements

Equipment owners shall retain, at a minimum, all documents, invoices, and correspondence associated with the application, award, contract, purchase, installation, equipment operation (and if applicable, registration, insurance, and warranty), and reporting for at least 2 years after the end of the equipment project contact term or 3 years after final payment, whichever is later. Records shall be readily available and accessible to the local agency, CARB, or CARB designee upon request for the purposes of ongoing evaluations, Program reviews, or fiscal audits.

H. Annual Reporting Requirements

Equipment owners shall be responsible for annual reporting to the local agency that includes, but is not limited to:

1. Switcher, rail car mover, medium horsepower, and line-haul locomotive

- Contact information (owner name, company, address, and phone).
- Build number, date, builder, builder model.
- Date of equipment installation.
- Locomotive/rail car mover type.
- Name and location of home railyard.

- Annual megawatt-hours of operation, notch profile and fuel consumed since last report.
- Representative profile data to determine engine duty cycle.
- Certification and documentation of 90% or 100% California-only operation for switchers and medium horsepower locomotives.
- Certification and documentation of percentage of operation in the four California trade corridors for switcher and medium horsepower locomotives.
- Certification and documentation of percentage of California operation for line-haul locomotives.
- Certification and documentation of percentage of operation in the four California trade corridors for line-haul locomotives.
- Summary of maintenance performed (including location) and inspections conducted.
- GPS data in a usable format.
- The percentage of annual travel in each of the four California trade corridors:
 - Bay Area trade corridor.
 - Central Valley trade corridor.
 - Los Angeles/Inland Empire trade corridor.
 - San Diego trade corridor.
- Certification that the bond-funded project was used in accordance with the signed contract and that all information submitted is true and accurate.
- Other information as requested by CARB or the local agency.

2. Locomotive emissions capture and control system

- Contact information (owner name, company, address, and phone).
- Description of locomotive emissions capture and control system.
- Railyard name/identifier.
- Date and location of equipment installation.
- Total hours the equipment operated while connected to an operating locomotive over the reporting period.
- Total number of locomotives connected to the system over the reporting period.
- Estimated average locomotive engine size (in horsepower) connected to the system.
- Power usage to run the hood and source of power (grid or generator).
- Natural gas usage (if any) for heating selective catalytic reduction duct burner.
- Summary of maintenance, source testing and inspections conducted.
- Signed certification statement that the bond-funded project was operated in accordance with signed contract and that all information submitted is true and accurate.
- Other information as requested by the local agency or CARB.

3. Electric charging stations/hydrogen fueling units

- An estimate of the annual hours of operation.
- Description of any equipment failure or other event that prevented locomotives from using the charging/fueling units more than one week.