

**Proposition 1B:
Goods Movement Emission Reduction Program
Update to Program Guidelines**

STAFF DRAFT CONCEPT PAPER

Release Date: February 18, 2010
Comments Due: March 4, 2010

California Environmental Protection Agency



Proposition 1B: Goods Movement Emission Reduction Program
Update to Program Guidelines
Staff Draft Concept Paper

DOCUMENT AVAILABILITY

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COMMENTS

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Proposition 1B: Goods Movement Emission Reduction Program
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I. PURPOSE OF THIS CONCEPT PAPER

Air Resources Board (ARB or Board) staff developed this concept paper to aid public discussion of updates to the existing Proposition 1B: Goods Movement Emission Reduction Program (Program) - Guidelines for Implementation (Guidelines). This incentive program to reduce the emissions and health risk from freight transport in California is underway.

The concepts in this paper for updates to the Guidelines are part of a periodic process to revisit the Program requirements following each appropriation of funds. The proposed updates include new project choices, modifications to existing project options based on new information, and administrative changes to improve effectiveness.

We are also working to expand the ability of independent truckers and small fleet owners to access both grants and supplemental financing. This paper includes several concepts to reduce barriers to their participation in the incentive programs, reflecting lessons learned from implementing the Drayage Truck Rule.

This paper is written for those already familiar with the Program. For background information and an explanation of terms, please see the Staff Report and Program Guidelines adopted by the Board on February 28, 2008 on the Program website. These materials provide a comprehensive discussion of the Program structure, goals, and requirements. Currently, ARB staff is not considering any fundamental changes to the structure or goals of the Program.

We are seeking your input on the concepts and details described here, and other updates you believe would make the Program more effective in reducing emissions and the associated health risk from freight operations. Any changes must be consistent with the implementing legislation, which directs ARB to focus funding on projects that can achieve the greatest emission reductions per State dollar invested and the earliest possible health risk reduction in communities heavily impacted by goods movement.

Please provide your comments to ARB staff as soon as possible so we can consider them in the development of the proposed Update to the Guidelines. ARB expects to release the proposed Update to the Guidelines and Staff Report in early March for Board consideration at a public hearing on March 25-26, 2010, in Sacramento.

II. BACKGROUND

The diesel engines used in trucks, locomotives, ships, harbor craft, and cargo equipment to move goods in California are major contributors to the State's biggest pollution challenges. These sources account for more than two-thirds of the toxic diesel particulate matter (PM) statewide, with the highest levels in low-income and minority communities near ports, rail yards, freeways, and other freight facilities. They also produce about one-third of the nitrogen oxides (NOx) and sulfur oxides that form regional ozone or fine particles, especially in the South Coast and San Joaquin Valley.

ARB has implemented a comprehensive program to characterize and reduce the impacts of air pollution from freight operations on nearby communities. Building on health risk assessments for major port and rail yard facilities, ARB has adopted plans, regulations, incentive programs, and other strategies to cut emissions from freight sources.

A. Health Impacts from Goods Movement

California residents face serious health impacts from freight-related diesel pollution, especially in communities near ports, rail yards, roads with high truck traffic, and distribution centers. The diesel engines that move freight are also a major cause of high regional ozone and fine particle levels that harm millions of Californians today. Freight-related emissions are a public health concern at both the regional and community levels because they contribute to serious health effects, such as cardiac and respiratory diseases, increased asthma and bronchitis episodes, increased risk of cancer, and premature death.

ARB has completed health risk assessments for the busiest port complex in the U.S. (the Ports of Los Angeles and Long Beach), 18 major rail yards, and the West Oakland community (impacted by the Port of Oakland, two rail yards, and four freeways). These assessments confirm elevated cancer and non-cancer health risks around many freight facilities throughout the State. At 2005 cargo levels, we estimate the excess cancer risk attributable to diesel equipment operating at these facilities to be greater than 500 in a million for people living near the busiest sites.

B. Plans and Strategies

The Board established public health goals in its 2006 Emission Reduction Plan for Ports and Goods Movement in California: (1) to reduce the statewide health risk from diesel particulate matter (diesel PM or PM) by 85 percent by 2020, (2) to expeditiously reduce the localized health risk from diesel PM in impacted communities, and (3) reduce the emissions of nitrogen oxides (NOx) that contribute to regional fine particle and ozone pollution to achieve ambient air quality standards.

The plan's new emission reduction strategies to achieve these goals are also reflected in the Administration's 2007 Goods Movement Action Plan and the 2007 California

State Implementation Plan (SIP). As part of the 2008 Climate Change Scoping Plan, ARB is working on a longer-term strategy to spur improvements in the efficiency of the freight transport system to meet the State's targets to cut greenhouse gas emissions.

ARB has adopted a broad suite of regulations and other programs for cleaner equipment and fuels to implement all of these plans. Key ARB regulations require: (1) the existing fleet of diesel trucks, harbor craft, and cargo equipment to accelerate the transition to low-emission models, (2) time limits on unnecessary truck idling, (3) the use of cleaner fuels in ships, harbor craft, and land-based sources, and (4) the use of shore-based electrical power for ships at dock instead of running the on-board diesel engines.

The major railroads are also reducing emissions at rail yards under agreements with ARB to protect nearby communities and improve regional air quality. In 2009, staff presented *Recommendations to Provide Further Locomotive and Railyard Emission Reductions* to the Board. These recommendations rely on upgrading a significant portion of the locomotive fleet operating in California to cleaner technology, through a potential mix of voluntary actions, enforceable agreements, incentives, and regulatory measures. Rail yard-specific mitigation measures for the highest risk rail yards are another key component to complement the statewide and regional actions.

ARB has also expanded its enforcement activities with field inspections performed in communities near ports, rail yards, freeways, distribution centers, and border crossings.

C. Program Authority and Scope

Proposition 1B (Prop. 1B), approved by voters in 2006, authorizes \$1 billion in bond funding to the ARB to cut freight emissions in four priority trade corridors. The State budgets for fiscal year (FY) 2007-08, 2008-09, and 2009-10 appropriated a total of \$750 million to ARB for the Program. The major sources eligible for bond funding include heavy-duty diesel trucks, freight locomotives, ships at berths, commercial harbor craft, cargo handling equipment, and infrastructure for electrification of truck stops, distribution centers, and other places trucks congregate.

State law (Health and Safety code section 39625 et seq.) directs ARB to administer the Program to maximize the emission reduction benefits while achieving the earliest possible health risk reduction in communities heavily impacted by goods movement. Governor Schwarzenegger's Executive Order S-02-07 on Bond Accountability provides further direction to ARB to ensure accountability and transparency in Program implementation.

The Program supplements regulatory actions and other incentives to cut diesel emissions by funding projects "not otherwise required by law or regulation." The funds provide an incentive to equipment owners to upgrade to cleaner equipment and achieve early or extra emission reductions beyond those required by applicable regulations or enforceable agreements.

The Program is a partnership between ARB and local agencies (like air districts and ports) to quickly reduce air pollution emissions and health risk from freight movement along California's four priority trade corridors. ARB awards Program funding to local agencies; those agencies then use a competitive process to provide incentives to equipment owners to upgrade to cleaner technology.

D. Current Status

The Board adopted the Guidelines for FY2007-08 funds in February 2008 and awarded the first \$250 million in bond funding in May 2008 to local agencies. After bond funding delays in 2009, work on all of the FY2007-08 grants is now in progress or completed for trucks, locomotives, and ships at berth. The Guidelines, together with subsequent Board Resolutions and Executive Orders, are available on the Program website.

Executive Order S-02-07 requires agencies administering bond funds to provide an annual report to the Department of Finance on the status of the Program. Our December 2009 status report is posted on the Program website and included as Appendix A to this concept paper. The report explains the rollout of bond funds and the restart of suspended projects, as well as detailing the current status of each local agency's grant.

III. ELIGIBLE PROJECTS FOR NEW FUNDS

The specifications for eligible projects are an integral part of the update to the Guidelines after each appropriation of funding. The Guidelines direct ARB staff to evaluate advances in technology, changes in equipment costs, regulatory actions, demand for Program funds in the prior funding cycle, and other new information that influences the design of project specifications.

This paper outlines concepts for the eligible projects in each source category that could be funded with new monies. Local agencies can choose which source categories they wish to seek funding for and would need to allow equipment owners to apply for all eligible project options in that source category, with funding awards determined by the competitive process.

A. Trucks

This concept paper presents the project options for both truck categories – trucks serving ports and intermodal rail yards and other trucks – together for convenience and brevity. We are seeking comment on whether the two truck categories should be combined for future funding, increasing the total monies available for the most competitive truck projects, with no specific requirements for port or rail yard visits.

Trucks are subject to ARB's Drayage Truck Rule and the Statewide Truck and Bus Rule, which define the schedule to upgrade existing trucks to cleaner models.

1. Summary of All Equipment Project Options

While retaining the project options offered in the first year of the Program (with updated funding levels), staff is developing additional options to accelerate deployment of trucks meeting model year (MY) 2010 emissions and to offer lower-cost options for truck owners to achieve MY2007 emissions through replacements with used trucks or use of combined PM plus NOx retrofit devices. Table 1 shows the project options staff is evaluating.

Table 1: Updated Equipment Project Concepts for Trucks

Eligible Equipment and Upgrade	Maximum Program Funding		Early Period ¹	Project Life
	New	Existing		
A Replace truck with MY2003 or older engine with truck meeting MY2010 emissions ²	\$60,000	\$50,000	2-3 yrs	<u>Other trucks</u> 5 yrs or 500,000 mi
B Replace truck with MY2003 or older engine with <i>used</i> truck meeting MY2007 emissions ³ (<i>less than 200,000 mi</i>)	\$40,000	\$50,000	2-3 yrs	<u>Port/rail yard trucks</u> 5 yrs or 350,000 mi (whichever milestone comes first)
C Repower truck with MY1994-2006 engine with new engine that meets MY2010 emissions ²	\$30,000	\$20,000	2-3 yrs	
D Retrofit truck with MY1994-2006 engine with PM plus NOx retrofit device to meet MY2007 emissions ³	\$20,000	N/A	2-3 yrs	
E Retrofit truck with MY1994-2006 engine with PM filter ⁴ Option A: Option B: (<i>possible addition</i>)	\$5,000 \$10,000	\$5,000 \$5,000	6 mos 1 yr	2 yrs 4 yrs
F Three-way truck transaction: (1) replace <i>middle-aged</i> truck with MY1998-2006 engine with <i>new</i> truck meeting MY2010 emissions ² ; (2) retrofit <i>middle-aged</i> truck with PM filter; (3) replace <i>old</i> truck with MY1993 or older engine with retrofit <i>middle-aged</i> truck; and (4) scrap <i>old</i> truck	\$60,000 \$5,000	\$50,000 N/A	2-3 yrs	<u>New truck</u> 5 yrs <u>Middle-aged truck</u> 2 yrs

¹ ARB staff will publish a table showing when Prop. 1B-funded truck upgrades must be operational and when those trucks can be included in fleet averaging under the Statewide Truck and Bus Rule.

² MY2010 emissions means an engine certified by ARB Executive Order on the heavy-heavy duty test cycle to CERT and FEL emissions of 0.20 grams per brake-horsepower hour (g/bhp-hr) NOx and 0.01 g/bhp-hr PM or less.

³ MY2007 emissions means an engine certified by ARB Executive Order on the heavy-heavy duty test cycle to CERT and FEL emissions of 1.20 g/bhp-hr NOx and 0.01 g/bhp-hr PM or less.

⁴ This project option not available for trucks serving ports and intermodal rail yards, except those trucks with MY2004-2006 engines.

2. Discussion of Concepts for Change

This section describes the updates for truck projects, along with a brief discussion of the basis for those changes. Under the combination of existing and new equipment project options, a local agency would evaluate all of the applications from truck owners and score each application based on the established criteria of emission reductions and cost-effectiveness to determine which trucks receive funding. Each truck competes independently, so there is no advantage or disadvantage based on fleet size.

a. Eligibility – truck classification and weight

Concept: Replace truck weight eligibility requirement for Class 8 trucks with 33,001 pounds or greater gross vehicle weight rating (GVWR) with the requirement that trucks have a declared gross vehicle weight (GVW) or declared combined gross vehicle weight (CGW) of 60,001 pounds or greater.

Basis: To improve the efficiency of Program administration, changing to 60,001 pounds or greater GVW or CGW would allow the local agency to determine eligibility from the Department of Motor Vehicles (DMV) registration records and provide confidence that a truck is eligible before investing staff resources in the pre-inspection. Also, the adjusted weight would allow funding for some two-axle tractors that pull heavier loads with the same engines used in larger trucks. This concept would closely align with the other ARB incentive programs.

b. Eligibility – engine model year

Concept: Change eligibility criteria from the model year of the truck *chassis* to the model year of the truck *engine*.

Basis: Since the Statewide Truck and Bus Rule uses engine model year to determine emission requirements, this Program should use the same criteria. This modification also aligns with the other ARB incentive programs.

c. Eligibility – Prior California operation and registration

Concept: Allow an alternative means to demonstrate 2 years of prior California operation and registration for trucks with monthly or seasonal registration.

Basis: Use the available last 8 registration entries in the DMV database. For monthly registrants, this will show a maximum 8-month registration history. Local agencies can exercise discretion to allow the applicant to supplement the available DMV history with alternate documentation that establishes a pattern of California operation over the last 2 years. This alternate documentation may include, but is not limited to, proof of insurance, driver logs, shipment records, and/or fuel purchase records.

d. Eligibility – inspections and compliance checks

Concepts: Provide an option for local agencies to delegate truck pre-inspections to truck dealers or retrofit installers that are operating under a legal agreement with the local agency to perform the required Program tasks. Also reduce the number of photographs required for each old and upgraded truck. At the local agency's discretion, allow a process for equipment owners to clear outstanding ARB compliance violations within a set timeframe and be eligible for funding under the solicitation.

Basis: The first two concepts have been proposed by local agencies implementing existing truck grants to accelerate the grant timelines and reduce the staffing burden on the local agency. Local agencies also requested the opportunity for a truck owner to resolve a compliance violation rather than being disqualified from that round of funding. ARB staff is developing Guideline amendments to incorporate these proposals, with the conditions that all truck owners are offered the same opportunities to clear violations and to purchase qualifying equipment from the vendor of their choice.

e. Eligibility – trucks previously retrofit with Program funds

Concept: Allow trucks that have a diesel PM filter funded with Program monies, and that have operated with that filter for at least 2 years, to be eligible to compete for funding to replace the same truck at a reduced funding level. This concept would apply retroactively to projects funded with FY2007-08 monies.

For example, if an owner received \$5,000 to install a Level 3 diesel particulate filter on a truck with a MY1999 engine, that owner could apply 2 years later for funding to replace it with a MY2010 truck. However, the maximum funding amount for the new truck would be reduced by the Program funds already received (i.e., \$60,000 for replacement minus \$5,000 for retrofit equals new Program funding of \$55,000).

Basis: The current Guidelines restrict a truck owner who received Program funds for a PM retrofit device from applying for funding to later replace the same truck. This new approach would remove a barrier that will be an issue for the second round of drayage truck upgrades to meet the January 2014 drayage requirements. By capping the combined Program funds, we can ensure that no single truck receives extra funds through this approach.

f. Project option – funding levels for truck replacement

Concepts: Raise Program funding cap to \$60,000 per truck for replacement with a truck meeting MY2010-equivalent emission levels, as defined in the Guidelines. Also offer up to \$40,000 for replacement with a used truck (with less than 200,000 miles) with an engine meeting MY2007 emissions or lower.

Basis: With the requirement in the Statewide Truck and Bus Rule that all trucks eventually comply with MY2010 emissions, this Program should share the same end

goal. Trucks meeting these MY2010 emissions reduce NOx emissions by over 80 percent compared to the MY2007 engines, helping to cut fine particle and ozone pollution.

As used trucks with MY2007 emissions become available in more significant numbers, an option for the purchase of a used truck expands the choices available to truck owners at a lower overall cost than a new truck. By limiting the used truck to 200,000 miles or less at the time of purchase, we can sustain the emission benefits of the Program's investment. We are seeking comments on the appropriate mileage maximum to ensure that used trucks are a sustainable investment.

g. Project option – combination PM plus NOx retrofit device

Concept: Add new equipment project option for trucks with MY1994-2006 engines to receive Program funding up to \$20,000 per truck for installation of a combination PM plus NOx retrofit device that allows the truck to achieve MY2007 emissions or lower.

Basis: As new technologies become available, ARB staff wants to ensure an opportunity to fund retrofit projects that achieve MY2007 emissions.

h. Project option – truck reuse

Concept: Expand the reuse options for middle-aged trucks turned in as part of a Prop. 1B replacement project that would otherwise be scrapped. All options for reuse would need to deliver an equivalent or greater air quality benefit than scrappage of the middle-aged truck. We would propose that this concept be applied retroactively to trucks being replaced with FY2007-08 funds. We are exploring the following potential reuse options:

- The Program currently allows for a three-way truck transaction where a new truck replaces a middle-aged truck. In turn, the middle-aged truck is retrofitted with a PM filter and replaces an old truck that is ultimately scrapped. We are proposing to extend the model year eligibility requirements for the old and middle-aged trucks to broaden the pool of potential participants. We are also working with an air district to develop practical mechanisms to recruit owners of old trucks who may want to scrap the old truck and upgrade to a middle-aged truck with a retrofit for a minimal cost. Local agencies could independently solicit owners of both old and middle-aged trucks to participate, and facilitate the retrofit of the middle-aged truck. Truck dealers are possible partners given their vested interest in selling the new truck.
- Middle-aged trucks turned in as part of a Prop. 1B replacement project could be upgraded with a PM filter and used to replace an old truck in a low use fleet or in a NOx-exempt area in California. The old truck would be scrapped. We are discussing the possibility of using other funding sources, including the Carl Moyer Program, to co-fund the cost of the retrofit device for trucks being reused outside of the Prop. 1B three-way truck transaction.

- A government agency (such as the federal government or another state air agency) requests that a middle-aged truck turned in as part of a Prop. 1B replacement project be available for temporary reuse outside of California, with safeguards to ensure that the truck cannot return to California. For example, these middle-aged trucks could be used for overseas disaster relief efforts, or they could be retrofit and used to replace even older trucks in out-of-state communities highly impacted by diesel PM.
- An educational institution requests the use of a few trucks in vocational training for retrofit installers. Trucks would be registered as non-operational and would have to be scrapped after a specified period.

i. Competitive ranking – mileage, hours of operation

Concepts: Use annual miles for the existing truck to estimate miles and emission reductions for the upgraded truck. Consider a default minimum mileage based on truck engine model year, with the ability of the owner to demonstrate higher mileage based on documentation.

Also allow owners of specified truck types the option to use documented hours of operation, rather than vehicle miles traveled, as the activity input to calculate the potential emission reductions for the competitive funding process. These truck types would include concrete or cement mixers and dump trucks that use the truck engine to power operations that don't involve travel. These trucks would still be subject to all of the Program eligibility requirements, including the transport of "goods."

Basis: Annual mileage is a critical input to the emission calculations used in the competitive ranking process. Mileage data is required as part of the application for grant funding, but many truck owners omit the data or provide inadequate documentation, requiring significant follow up from agency staff. Some of the oldest trucks targeted for replacement no longer have working odometers. The effort to obtain and verify the information is resource-intensive and time consuming for both the truck owner and the local agency. Providing a default option would help address these issues.

Since the types of trucks that could use hours of operation may produce significant air pollution without logging miles on the vehicle's odometer, the potential for emission reductions by upgrading these trucks may be more accurately estimated using hours of operation.

Some drayage truck owners recently requested the ability to use operating hours instead of mileage because of the substantial time spent in slow moving queues waiting to pick up or drop off a load at ports or rail yards. We are assessing whether this approach would be feasible and advisable, given the resource constraints discussed above.

j. Competitive ranking – competition between project options

Concept: Seek comment on allowing all truck equipment project options (retrofits, repowers, replacements, and truck stop electrification) to compete against each other for funding, rather than prioritizing funding for retrofits first.

Basis: It may improve the effectiveness of the Program to foster competition between all truck project types and fund the most beneficial projects. However, if this approach results in more funding for replacements and less funding for retrofits, fewer truck owners would receive incentives with the same Program dollars. If ARB implements the concept, we also need to provide independent truckers and owners of small fleets with improved access to financing for replacement trucks to ensure that they can continue to compete successfully for grants.

k. Funding type – lease-to-own programs

Concepts: Expand program flexibility and clarify requirements to increase the options for different types of lease-to-own programs that typically allow a trucker to take possession of a replacement truck with a minimal down payment and an affordable monthly payment. Also allow applicants to transfer their application into an approved new or existing lease-to-own program after the solicitation period has closed.

Streamline the ARB review and approval process for lease-to-own programs by allowing local agencies the option to use a contract with lessors and lease riders that each include Prop. 1B provisions, as defined by ARB. These provisions would need to override the lessor's standard lease provisions where they conflict with Program requirements. Provide additional information describing how certain Program responsibilities can be distributed between the local agency (and any formal contractors), lessor, and lessee.

Basis: ARB staff believes lease-to-own programs provide a viable option for many low-income truck owners to transition to cleaner equipment over time. The Program should support a range of lease-to-own approaches, while retaining important safeguards to protect participant truck owners and the State's financial investment. The approach to override standard lease conditions with a Prop. 1B-specific contract and lease rider would allow the local agency and ARB to avoid having to negotiate changes in each lessor's standard lease agreement to accommodate the Program requirements. For lease-to-own programs, the existing owner of the old truck still needs to be the applicant and the lessee of the replacement truck.

l. Funding type – combined grant/loan guarantee (fleets of 20 or less)

Concept: Increase truck owners' access to financing by combining Prop. 1B grants with State-subsidized loans or loan guarantees. Make Program funds available to raise the loan loss reserve (if needed) on the Providing Loan Assistance for California Equipment (PLACE) loan guarantee program to help truck owners qualify for loans at

reasonable interest rates. Evaluate the ability under State law to provide Program funds to non-profit organizations to subsidize or guarantee loans for truck retrofits or replacements, including lease-to-own programs.

Basis: ARB staff considered developing a Prop. 1B grant/loan guarantee program for small truck fleets, but determined that it was more efficient for Prop. 1B grant recipients to access ARB's PLACE program for the loan portion. Funding non-profits that specialize in assistance to small businesses and trucking firms would be another effective mechanism to expand the access to financing for truck upgrades.

m. Operating requirements – California operation for new truck

Concept: Evaluate the feasibility of offering local agencies the option to allow 90 percent California operation, at a reduced funding level, if the upgraded truck is equipped with an electronic monitoring system (i.e., Global Positioning System) for the project life that can reliably record and report miles traveled within and outside California to the local agency. The truck owner (or local agency) would be responsible for: (1) purchasing a monitoring unit with a warranty period that equals or exceeds the project life, (2) maintaining monthly service contract on the unit for the project life, and (3) transmitting periodic electronic reports to the local agency. No Program funds could be used for these additional expenses. The local agency would also need to show that it has the staff resources available to implement this option without additional administrative funding under the Program.

Basis: ARB staff has received many requests to allow a small proportion of truck operation just across the California border to distribution centers in neighboring states or Mexico. We still believe there is sufficient funding demand for truck projects that are restricted to 100 percent California operation. The 100 percent approach provides the greatest certainty of substantial truck operation within the four priority trade corridors as required by the implementing statute, with the lowest level of staff resources required to monitor compliance. However, given the widespread requests to change this operating requirement, we are assessing the risks and benefits to develop a recommendation for Board consideration.

n. Reporting – annual reporting to local agency

Concept: Reduce the reporting requirement for trucks with PM filters and a 2-year project life by eliminating the first annual report.

Basis: Given the short project life, this is a reasonable step to reduce the reporting burden on equipment owners and local agencies.

- o. Change in ownership – owner’s mechanisms to leave contract or change trucks funded under this Program

Concept: In addition to retaining the current option to allow equipment owners the ability to sell the truck to another party who will take over the remainder of the contract term and obligations, we are considering a few new options that would allow the equipment owner to: (1) buy out the contract for the operable truck at a prorated grant amount, plus a \$5,000 buy-out fee, (2) replace the destroyed or inoperable truck with an equivalent model (at the owner’s expense) to serve out the remainder of the contract term, or (3) opt to not replace the destroyed or inoperable truck, but pay back a prorated grant amount, or the insured value of the truck, whichever is less.

Basis: ARB staff acknowledges that there may be circumstances where funded applicants need to withdraw from an executed contract. When the contractual obligations of the funded project cannot be met, we need a mechanism to allow withdrawal, while preserving the foundation of the Program. ARB staff is seeking comment from both truck owners and community/environmental groups regarding how to accommodate unpredictable (and sometimes catastrophic) events and still ensure that Californians get the expected benefits from the investment of public funds.

B. Locomotives and Rail Yards

1. *Summary of All Equipment Project Options*

We are considering new project options in addition to the options previously offered for switcher and line-haul locomotives. References to engine “Tiers” mean the applicable emission standards established by the U.S. Environmental Protection Agency (U.S. EPA). The new concepts include a greater share of Program funding for early introduction of technology meeting Tier 3 and Tier 4 emission standards, as well as addition of an option to capture and control locomotive emissions at rail yards. Table 2 shows the project options staff is evaluating.

Table 2: Updated Equipment Project Concepts for Locomotives and Rail Yards

Eligible Equipment		Upgrade	Maximum Program Funding	Project Life
A	Switcher locomotive (1,006 hp-2,300 hp) Uncontrolled, Tier 0 or Tier 1 diesel freight locomotive	Replace, repower or rebuild with a new generator-set, hybrid, or alternative technology to meet emission limit of: 3.5 g/bhp-hr NOx or less, 0.10 g/bhp-hr PM or less	(a) Lower of 50% of eligible cost or \$750k to meet emission limit of: 3.5 g/bhp-hr NOx or less, 0.10 g/bhp-hr PM or less (b) \$1M to meet Tier 4 standard for NOx only or PM only (c) \$1.2M to meet Tier 4 standards for both NOx and PM	15 yrs
B	Medium horsepower line-haul locomotive (2,301 hp-4,000 hp) Uncontrolled, Tier 0 or Tier 1 diesel freight locomotive	Replace, repower or rebuild with a new engine, or install alternative technology to meet emission limit of: 4.0 g/bhp-hr NOx or less, 0.10 g/bhp-hr PM or less	(a) Lower of 50% of eligible cost or \$750k to meet emission limit of: 4.0 g/bhp-hr NOx or less, 0.10 g/bhp-hr PM or less (b) \$1M to meet Tier 4 standards for NOx only or PM only (c) \$1.5M to meet Tier 4 standards for NOx and PM	15 yrs
C	Line-haul locomotive (4,001 hp or higher) Uncontrolled, Tier 0 or Tier 1 diesel freight locomotive	Replace or rebuild to meet Tier 3 standards or lower emissions	(a) Lower of 50% of eligible cost or \$1.2M to meet Tier 3 standards through use of Tier 3 engine or Tier 2 engine with certified "Tier 2 Plus" kit (b) \$1.5M to meet Tier 4 standards for NOx only or PM only (c) \$2M to meet Tier 4 standards for NOx and PM	15 yrs
D	Existing freight rail yard	Install infrastructure for a locomotive emissions capture and control system (a.k.a. hood or bonnet) that achieves a minimum control effectiveness of 85% for NOx and 85% for PM	Funding level that provides a cost-effectiveness of 0.15 lbs/State \$ or higher (<i>higher cost-effectiveness would likely be needed to compete successfully for funding in this category</i>)	10 yrs

2. Discussion of Concepts for Change

This section describes the potential updates for locomotive and rail yard projects, along with a brief discussion of the basis for those changes. The changes under consideration would help implement the priority options in the *Recommendations to Provide Further Locomotive and Railyard Emission Reductions* that the Board approved in September 2009. Under the combination of existing and new equipment project options, a local agency would evaluate all of the applications from locomotive owners and rail yard operators, then score each application based on the established criteria of emission reductions and cost-effectiveness to determine which projects receive funding.

a. Project option – partial or full Tier 4 engine for all locomotive types

Concept: Expand project options to offer a greater share of Program funding for early introduction of locomotives or engines that partially or fully meet Tier 4 emission levels.

Basis: Cleaner locomotive technology is in development to significantly reduce PM, NOx, or PM plus NOx to meet Tier 4 emissions – potentially several years ahead of the national requirements. By offering to pay a greater share of the cost for these engines before they are required, we hope to help create early customer demand for the technology and spur the manufacturers to make them available sooner.

b. Project option – medium horsepower line-haul locomotive

Concept: Add a new project option for medium horsepower line-haul locomotives to replace, repower, rebuild, or retrofit them with technology that can achieve emission levels below Tier 3 in the near-term.

Basis: Medium horsepower line-haul locomotives are typically older uncontrolled units that are used as large switchers, in short-haul operations, or as helper locomotives to add pushing or pulling power to another locomotive (i.e., extra power to move trains over hills). They are used extensively in California and can be cost-effectively upgraded with the installation of a new engine or generator-set. New technology may soon become available to reduce emissions to 4.0 g/bhp-hr NOx and 0.1 g/bhp-hr PM. With Program funds covering about 50 percent of the cost, these projects would be very cost-effective and competitive for locomotive/rail yard funds.

c. Project option – line-haul locomotive

Concept: Update the current Program option to offer funding to replace or rebuild an existing line-haul locomotive to Tier 3 standards. In the interim until Tier 3 engines become commercially available, the Program would fund Tier 2 engines with a certified “Tier 2 Plus” retrofit kit required to be installed at the owner’s expense when available.

Basis: Tier 3 standards require lower PM emissions for line-haul locomotives starting in 2012. We expect Tier 3 engines to be available within the timeframe for the next rounds of Program funds. A line-haul equipped with both a Tier 2 engine and a Tier 2 Plus retrofit achieves the same low PM emissions.

d. Project option – emission capture/control technology for rail yards

Concept: Offer new equipment project option based on technology being demonstrated to capture and control emissions generated by locomotives during maintenance and diagnostic operations in rail yards. One design may be capable of capturing the exhaust from multiple locomotives and routing it to a single pollution control device for 85 percent overall control effectiveness. Because the cost of such technology is uncertain and expected to vary considerably based on the number of

locomotives that can be simultaneously controlled, we are developing a maximum Program funding level based on a cost-effectiveness of 0.15 pounds per State dollar, as determined by the Program Project Benefits Calculators. The cost-effectiveness would need to be equal to or greater than 0.15 for an emissions capture and control system to be eligible to compete against other locomotive/rail yard projects for funding.

Basis: A new emissions capture and control technology (known as the hood or bonnet) may complete testing and become commercially available in the near-term to reduce emissions generated by locomotives during maintenance and diagnostic operations at rail yards. An example of this technology consists of a stationary infrastructure with movable hood(s) that directs locomotive emissions to a scrubber for PM control and a selective catalytic reduction device for NOx removal. We anticipate a high cost for a system to capture comparatively low emissions from locomotives during these operations. As a result, the applicant would likely need to request only a small portion of the total cost from Program funds to successfully compete against locomotive upgrade projects. Like projects for other source categories, Program funding could be used to help defray purchase and installation costs, but not for annual operating expenses.

e. Pending changes via Executive Order

ARB staff is currently developing an Executive Order to implement some critical Guideline changes now, in advance of Board action, to support effective implementation of existing projects using FY2007-08 funds. These pending changes include the administrative modifications or clarifications discussed below for locomotives. We will include all of the changes implemented via the Executive Order in the proposed update to the Guidelines. Approved Executive Orders are available on the Program website.

- **California operation of existing locomotive.** Provide an alternative approach to meeting the current eligibility requirement that the specific, existing locomotive proposed for upgrade has been operating in California for the past 2 years. Instead, the railroad or other equipment owner can demonstrate that the company has operated a fleet of locomotives of similar emissions and horsepower in California's trade corridors for the past 2 years. The net effect is the same. Program funding would reduce existing locomotive emissions in California by accelerating the scrappage and replacement of an old locomotive or upgrade of an existing locomotive to a cleaner model. This change will accommodate the current equipment tracking and recordkeeping used by one of the Class I railroads. As a result, both major railroads can compete for Program funding, increasing the cost-effectiveness and air quality benefits.

Class I railroads operating in the South Coast Air Basin. Clarify how Class I railroads subject to the 1998 Memorandum of Understanding (MOU) to reduce locomotive emissions in the South Coast Air Basin may compete for Program funding to upgrade locomotives that operate in that region. Any locomotive upgraded with Program funds shall be excluded from the calculation of each

railroad's fleet average NOx emissions level under the 1998 MOU for the duration of the project life. This precludes the possibility of paying for MOU compliance or double-counting the emission reductions. Program funds may be used for other voluntary actions by railroads.

For locomotives to be eligible for funding, State law requires that ARB find that the resulting emission reductions are not necessary to satisfy any mandated emission reduction requirement under any agreement with state or federal agency, or a local air district. By removing Program-funded locomotives from the 1998 MOU calculations, we can ensure that these public funds achieve emission reductions beyond those mandated under the agreement.

- **Ability to pre-order locomotives.** Allow railroads to use locomotives that are pre-ordered as part of the company's national equipment procurement cycle, even though the ordering occurs prior to the Program contract. Once a Program contract is signed with a local agency, the railroad commits to "tether" the new purchase here to satisfy the Program operating conditions. This change will put cleaner locomotives into California service faster.

C. Ships at Berth/Shore Power

1. *Summary of All Equipment Project Options*

ARB's Ocean-Going Vessels At-Berth Rule begins to phase in emission control requirements from 2010-2014, depending on the technology chosen to comply. Given the impending deadlines and the substantial lead time needed to design and build/install the technology, we can no longer expect that Program incentives will provide early emission reductions. Our focus for this source category must now be on achieving extra reductions, beyond those required under the Rule. In addition to retaining the project options offered in the first year of the Program for grid and non-grid-based shore power installation projects (with some modifications), we are considering an option for an emerging technology that can capture and control ship exhaust emissions at berth. Table 3 shows the project options staff is evaluating.

Table 3: Updated Equipment Project Concepts for Ships at Berth/Shore Power

Eligible Equipment		Upgrade	Maximum Program Funding	Project Life	Other Conditions (partial description)
A	Existing cargo ship berth	Install grid-based shore power (landside infrastructure to berth)	Lower of 50% of eligible cost or \$2.5M	10 yrs	60% of ship visits by 2014 80% of ship visits by 2017 90% of ship visits by 2020
B	Existing cargo ship terminal	Install non-grid-based shore power (zero-emission system or natural gas engine with selective catalytic reduction)	\$200k/MW	5 yrs	Ports of Los Angeles and Long Beach: 2,000 hrs/yr (2012-2013) 3,000 hrs/yr (2014 onwards) Other ports: 1,000 hrs/yr (2012-2013) 1,500 hrs/yr (2014 onwards)
C	Existing cargo ship terminal	Install an emissions capture and control system (a.k.a. hood or bonnet) that achieves a minimum control effectiveness of 85% for NOx and 85% for PM	Funding level that provides a cost-effectiveness of 1.0 lbs/State \$ or greater	10 yrs	Ports of Los Angeles and Long Beach: 2,000 hrs/yr (2012-2013) 3,000 hrs/yr (2014-2016) 4,000 hrs/yr (2017-2019) 4,500 hrs/yr (2020 onwards) Other ports: 1,000 hrs/yr (2012-2013) 1,500 hrs/yr (2014-2016) 2,000 hrs/yr (2017-2019) 2,500 hrs/yr (2020 onwards)

2. Discussion of Concepts for Change

This section describes the changes to the existing options, the new concept to reduce ship emissions at berth, and the basis for those changes. Under the combination of existing and new equipment project options, a local agency would evaluate all of the applications from ports, shippers, and/or marine terminal operators (plus any competing applications for cargo-handling equipment projects) and score each application based on the established criteria of emission reductions and cost-effectiveness to determine which projects receive funding.

Port and shipping interests have raised concerns about the funding level for installing grid-based shore power at ports that need additional power capacity to support the electrification projects. At these ports, the per berth cost for the project may be higher than the average assumed to determine the funding cap. ARB staff will assess this issue once we receive port-specific cost data that the industry has agreed to provide.

In addition to the changes discussed below, we are working to address the unique situation where seaports may apply to ARB for funding as local agencies, but also be the equipment owner for purposes of a grid-based shore power or other ships at berth

project. We plan to define the responsibilities of the port in this situation, including the requirements for project solicitation and competition. Whether the port or another entity acts as the local agency for ships at berth projects, the affected port must be a participant in the equipment project contract with the terminal operator/shipper since all parties share responsibility for the success of the project. We welcome suggestions from ports and others regarding the appropriate division of responsibilities.

a. Project option – emissions capture and control technology for ships

Concept: Offer new equipment project option based on technology being demonstrated to capture and control emissions from a ship's exhaust while at berth. One design may be capable of capturing the exhaust from multiple ships and routing it to a single pollution control device for 85 percent overall control effectiveness. Because the cost of such technology is uncertain and expected to vary considerably based on the number of ships that can be simultaneously controlled, we are developing a maximum Program funding level based on a cost-effectiveness of 1.0 pounds per State dollar, as determined by the Program Project Benefits Calculators. The cost-effectiveness would need to be equal to or greater than 1.0 for an emissions capture and control system to be eligible to compete against other ships at berth/shore power projects (and cargo equipment projects) for funding.

Basis: A new emissions capture and control technology (known as the hood or bonnet) may complete testing and become commercially available in the near-term to reduce emissions generated by ships running their auxiliary engines and boilers while at berth. An example of this technology consists of a stationary infrastructure with movable hood(s) that direct ship emissions to a scrubber for PM control and a selective catalytic reduction device for NO_x removal. Like projects for other source categories, Program funding could be used to help defray purchase and installation costs, but not for annual operating expenses.

b. Operating requirements – project life

Concepts: Reduce project life (and contract commitment) from 20 years to 10 years for grid-based shore power, and from 7 years to 5 years for non-grid-based shore power option.

Basis: Shore power projects require a port and/or terminal operator to keep the electric infrastructure functioning and shippers to contract to use the equipment for a specified number of visits or hours for many years into the future. The long project life for grid-based shore power makes the future year operating commitments for these projects more complicated since the terminal operator and/or shippers may not continue operating at that same berth for the full project life when their current lease expires. Terminal operators typically have leases that range from 20 to 30 years, but they could have many fewer years remaining on the existing lease when applying for Program funds. We are considering reducing the operating commitment for grid-based shore power to 10 years to address this issue.

For non-grid-based shore power, the phase in of more stringent emission reduction requirements in the Rule make it unlikely that this technology could continue to be used for compliance beyond 2016. We are evaluating the cost-effectiveness of a shorter project life of 5 years in response.

- c. Operating requirements – annual number of visits and hours of operation

Concepts: For the grid-based shore power option, start the usage requirements in 2014 (rather than the current 2011) and increase the percent of ship visits from 2017-2019 to achieve extra emission reductions. For the non-grid-based shore power option, start the usage requirements in 2012 (rather than the current 2010) and establish lower requirements for the smaller ports.

Basis: It is no longer a reasonable expectation that future shore power projects can be awarded funding, designed, built, and begin operation in time to provide early reductions ahead of the compliance dates in the Rule for the applicable technology. In response, the Program must shift the expected starting date back and focus on achieving extra reductions, beyond those required under the Rule.

There is a substantial difference in the number of ship visits and the average (hotelling) time at berth for ships at the Ports of Long Beach and Los Angeles compared to smaller ports like Oakland, San Diego, and Hueneme. For grid-based projects, the usage requirement is connected to the percent of ship visits, which accommodates these differences between the ports. However, since the non-grid-based option relies on the absolute number of operating hours per year, we are considering bifurcating those requirements to reflect the activity differences between the ports.

D. Commercial Harbor Craft

1. *Summary of All Equipment Project Options*

ARB has a Harbor Craft Rule that requires specific vessel types to upgrade to cleaner technology over time. The Board will consider amendments to expand the regulated vessel types in mid-2010.

We are considering expanding the project options for both the harbor craft subject to ARB in-use requirements and the existing vessels that are not regulated.

In addition to options to repower or replace the engines in harbor craft with cleaner models, we are suggesting supplemental funding for hybrid power systems that can be added to existing vessels or built into new vessels to reduce fuel consumption and emissions. All references to the “Tier” of the engine refer to the applicable emission standards established by U.S. EPA. Table 4 shows the project options staff is evaluating.

Table 4: Updated Equipment Project Concepts for Commercial Harbor Craft

Eligible Equipment		Upgrade	Maximum Program Funding	Project Life
A	Regulated in-use: Diesel-powered tugboats, towboats, or crew and supply vessels ¹	(a) Repower or replace Tier 0 propulsion engine or vessel with new Tier 2 or Tier 3 engine and scrap old engine/vessel ² (b) Repower or replace Tier 1 propulsion engine or vessel with new Tier 3 engine and scrap old engine/vessel ²	Lower of 50% of eligible cost or \$140/hp of old engine	8 yrs
B	Not regulated in-use: Diesel-powered work boats or pilot or commercial fishing vessels (fishing with 700 operating hrs/yr)	Repower or replace Tier 0 or Tier 1 propulsion engine or vessel with new Tier 2 or Tier 3 engine and scrap old engine/vessel	Lower of 80% of eligible cost or \$190/hp of old engine	8 yrs
C	Diesel-powered tugboats, crew and supply vessels, or pilot vessels	Retrofit hybrid power system on existing vessel with Tier 2 or Tier 3 propulsion engine(s), or replace existing vessel with a new vessel powered by a hybrid power system that includes Tier 2 or Tier 3 propulsion engine(s) <i>(May be combined with concurrent grant for engine upgrade)</i>	Lower of 80% of eligible cost or \$100/hp of old engine	8 yrs

¹ Based on anticipated 2010 Board adoption of amendments to the In-Use Commercial Harbor Craft Rule to include upgrade requirements for existing crew and supply vessels.

² Project needs to achieve at least 2 years of early reductions. This means the upgraded vessel needs to be operational at least 2 years before the applicable compliance date.

2. Discussion of Concepts for Change

This section describes the concepts for commercial harbor craft projects, along with a brief discussion of the basis for those changes. Under the combination of existing and new equipment project options, a local agency would evaluate all of the applications from harbor craft owners and score each application based on the established criteria of emission reductions and cost-effectiveness to determine which projects receive funding.

a. Project option – hybrid power system

Concept: Add an option to retrofit a hybrid power system on an existing diesel-powered tugboat, crew and supply vessel, or pilot vessel powered by Tier 2 or Tier 3 propulsion engine(s), or replace an existing vessel with a new vessel equipped with a hybrid power system that includes Tier 2 or Tier 3 propulsion engines. The maximum Program funding would be lower of \$100 per horsepower or 80 percent of the eligible cost for the hybrid system. A harbor craft owner could combine a grant to upgrade the propulsion engine(s) with a grant to retrofit a hybrid power system.

Basis: Currently, much of a tugboat's operating time is spent moving from one location to another or waiting for a job with the engines running; these activities use only a small fraction of the engine horsepower. A hybrid tugboat can use the electric batteries for its low power needs, saving fuel, engine wear and emissions. The batteries can be recharged by the existing, standard engines when they are running (or shore power, if available). This same technology may be adaptable to crew and supply vessels or pilot vessels in the future.

There are two working hybrid harbor craft in California. ARB staff and the current manufacturers of this new technology expect it to reduce PM, NOx, and fuel consumption by over 30 percent relative to Tier 2 engines. Testing is currently underway.

The availability of this option would be conditioned on an ARB staff determination that a hybrid power system installed on a vessel with Tier 2 propulsion engines reduces PM and NOx emissions by at least 30 percent each, compared to a similar vessel with Tier 2 propulsion engines, the same operating hours, and a similar duty cycle, but without the hybrid system.

b. Project option – Tier 3 engine

Concept: Add an option to repower a Tier 1 propulsion engine(s) with a Tier 3 or lower emission engine, or replace a Tier 1 engine-powered vessel with a Tier 3 engine-powered vessel, with the maximum Program funding typically at 50 percent for regulated vessels and 80 percent for not-regulated vessels.

Basis: With Tier 3 engines becoming available over the next few years, upgrading a Tier 1 engine to a Tier 3 engine (through a repower or replacement) would provide early reductions for regulated vessels and extra reductions for not regulated vessels.

c. Operating requirements – project life

Concept: Reduce project life and contract commitment for California-home port operation from 15 years of to 8 years for tugboats/towboats, and from 10 years to 8 years for other vessels.

Basis: To date, harbor craft owners have shown very little interest in using Program incentives to achieve early or extra emission reductions, based on the existing project specifications. Owners shared concerns about the length of the contract commitment and the inability to routinely rotate their boats to ports in other states. ARB could reduce the time commitment to 8 years and still achieve a reasonable cost-effectiveness value on these projects. The Guidelines provide some operational flexibility by allowing harbor craft funded under the Program to operate at any of the ports in California's trade corridors. However, if their operations require harbor craft owners to move vessels to out-of-state or out-of-country ports for several months throughout the year, then those vessels are not appropriate for funding under this Program.

E. Cargo Handling Equipment

1. *Summary of All Equipment Project Options*

The emission reductions from Program-funded upgrades cannot be used to comply with ARB’s Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards Rule. Since the Board adopted the Rule in December 2005, many of the compliance deadlines have passed or are rapidly approaching, which restricts the project options for cost-effective early or extra emission reductions in this source category. We are considering replacing the existing project option for rubber-tired gantry cranes with a new option that focuses on upgrading those cranes with an electric or zero-emission power system, as well as adding funding for certain yard trucks to be replaced with zero-emission or electric models. Table 5 shows the project options staff is evaluating.

Table 5: Updated Equipment Project Concepts for Cargo Handling Equipment

Eligible Equipment		Upgrade	Maximum Program Funding	Project Life
A	Existing diesel rubber-tired gantry crane	Repower diesel engine with electric or zero-emission power system	Lower of 50% of eligible cost or \$100k	15 yrs
B	Existing diesel-powered yard truck with MY2004-2006 off-road engine	Replace with new electric or zero-emission yard truck ¹	Lower of 50% of eligible cost or \$50k	5 yrs

¹ Project needs to achieve 2 years of early reductions. For fleets of 1-3 trucks, this means the project needs to be operational 2 years before the applicable compliance date. For larger fleets, this means the Program-funded truck is not eligible to be counted as a compliant truck in the fleet percentage calculations for a 2-year period.

2. *Discussion of Concepts for Change*

This section describes the concepts for revisions to the cargo equipment projects. Under the combination of existing and new equipment project options, a local agency would evaluate all of the applications from cargo equipment owners – combined with applications for ships at berth/shore power projects that are part of the same funding category – and score each application based on the established criteria of emission reductions and cost-effectiveness to determine which projects receive funding. If there is competition from ship projects, we would expect that cargo equipment owners would need to request funding below the maximum levels shown on Table 5, unless the cranes or yard trucks have a very high use level.

- a. Project option – energy storage system for rubber-tired gantry crane

Concept: Remove the existing project option for energy storage system on rubber-tired gantry cranes.

Basis: To achieve a competitive cost-effectiveness for this project option, the Program funding would fall below \$10,000 per system. Given the estimated \$160,000-\$320,000 cost to install an energy storage system, the incentive that could be provided by this Program would not be meaningful.

- b. Project option – electric or zero-emission power system for rubber-tired gantry crane

Concept: Add a new project option to repower the diesel engine in a rubber-tired gantry crane with an electric or zero-emission power system, with a maximum Program funding of \$100,000 per crane that would cover roughly 20-30 percent of the cost.

Basis: Removing the diesel engine from an existing rubber-tired gantry crane and converting it to run on electrical power could cost between \$330,000-\$590,000 per crane, including terminal modifications. This project would reduce NOx and PM emissions beyond the requirements of the Rule, plus cut fuel consumption and greenhouse gas emissions. Since this project would help the equipment owner meet the requirements of the Rule without early reductions, we are considering a funding level based on the incremental benefit of going from complying technology to more efficient electric or zero-emission power.

- c. Project option – electric or zero-emission yard trucks

Concept: Add a second project option to replace an existing yard truck with a MY2004-2006 off-road diesel engine with an electric or zero-emission yard truck the maximum Program funding of \$50,000 per truck would cover roughly half the incremental cost of going to electric technology.

Basis: The Rule compliance date for an existing yard truck powered by a MY2004-2006 off-road diesel engine ranges from 2011 through the end of 2016, depending on fleet size and technology. Trucks receiving Program funding would achieve 2 years of early NOx and PM reductions, and a small increment of NOx and PM reductions beyond the Rule, plus cut fuel consumption and greenhouse gas emissions.

F. Co-Funding with State Monies to Reduce Greenhouse Gases

We are evaluating a Program change to encourage co-funding from other State sources for projects with significant greenhouse gas emission reductions. This change would affect multiple source categories and aid progress under ARB's Climate Change Scoping Plan.

Concept: Exclude greenhouse gas co-funding provided by State sources from the Program calculation of cost-effectiveness, which is based on reductions of toxic and criteria pollutants per State dollar invested. The Assembly Bill 118 Alternative and Renewable Fuel and Vehicle Technology Program, administered by the California Energy Commission, is a potential source of State greenhouse gas funding that could be more readily combined with Prop. 1B monies for projects involving conversion to alternative fuel or hybrid technologies.

Basis: This concept would maintain the Program priority on reducing localized health risk and regional air pollution, while removing a barrier that makes projects using greenhouse gas co-funding from other State sources less competitive. Since greenhouse gas emissions are not quantified as part of the Program's competitive process, we believe these State monies can and should be excluded from the calculation of State dollars invested.

IV. ADMINISTRATION

Based upon experience with the initial grants, ARB staff is developing additional updates to the administrative requirements to improve how ARB staff and local agencies implement the Program. These administrative updates include:

- **Funding recapture and redirection.** Defining options to allow awarded funds to be redirected to other source categories if there is a lack of eligible projects; this includes what decisions could be made by the local agency, by ARB staff, or reserved for Board action. Based on changes to State law in 2009, local agencies may now fund backup equipment projects on ranked lists if executed contracts fall through (rather than funds from failed contracts reverting back to the bond account). ARB staff will reflect this change in the Guidelines update, applicable to grant agreements that implement FY2007-08 funds as well as future grant agreements.
- **Local agency solicitations for projects.** Clarifying solicitation requirements for local agencies on outreach, timeframes, and public availability of ranked list prior to funding. Allowing local agencies to start a second solicitation (with ARB staff approval) before the prior one is closed, if the demand is less than the supply. Requiring greater clarity and communications from local agencies to equipment owners regarding what those owners must do to maintain eligibility throughout the grant funding process. Providing ARB with the ability to require a standardized equipment project application (including electronic application format) and/or

solicitation periods. Such applications and solicitation periods would be developed in close coordination with active local agencies and the California Air Pollution Control Officers Association.

- **Local agency administrative funds.** For trucks, allowing the local agency to request and ARB to initially expend up to 75 percent (rather than the current 50 percent) of the local administration funds upon execution of the grant agreement and the availability of bond funds for the requested purpose, as documented in a letter from ARB authorizing the local agency to proceed with implementation. The remaining 25 percent of local administration funds could be requested once the local agency has liquidated at least half of the project funds, again contingent on the availability of bond funds for this purpose.
- **Local agency project applications submitted to ARB.** Streamlining requirements for applications by local agencies that have successfully implemented Program grants. Requiring local agency resolutions to identify the source and quantity of all non-private matching funds committed to projects. Also simplifying the data needed for local agency project proposals in a specific category. On trucks for example, local agencies could request just a total dollar amount without needing to project the likely demand for retrofit versus replacement funding. We will provide simplified default information for all source categories to support preliminary estimates of the emission reductions associated with each local agency project proposal.
- **Local agency advance of project funds.** Assembly Bill 672 (Bass, Statutes of 2009) allows local agencies implementing approved Prop. 1B projects to apply to the administering State agency for a “letter of no prejudice” to authorize future reimbursement for funds to be advanced by the local agency at its own risk. As the administering State agency for this Program, ARB staff is seeking comment on the appropriate conditions and process for approval of such letters. Projects covered by a letter of no prejudice would not gain an advantage or higher priority for funding by ARB as bond monies become available.

APPENDIX A

Proposition 1B: Goods Movement Emission Reduction Program, Award of First Year (FY2007-08) Program Funds

This status report provides an update on actions through December 2009 to implement the \$1 billion Proposition 1B: Goods Movement Emission Reduction Program (Program) to reduce emissions and health risk from freight operations in California's priority trade corridors. The Air Resources Board (ARB or Board) awards grants to local agencies like air districts and seaports, which then offer incentives in a competitive process to diesel equipment owners to upgrade to cleaner technologies.

Executive Order S-02-07 requires agencies receiving proceeds from bonds approved in November 2006 to provide semi-annual reports to the Department of Finance (DOF) to ensure that agencies execute projects in a timely fashion and the projects achieve their intended purposes. The Government Code also requires agencies administering bond funds to provide an annual report to DOF on the status of the project. All of the documents referenced in this update are posted on the Program website at <http://www.arb.ca.gov/gmbond>.

Allocations to Local Agencies. In May 2008, the Board allocated the \$250 million in Program funds appropriated under the Fiscal Year (FY) 2007-08 budget to the local agencies shown below. The local agencies signed grant agreements in June 2008 and moved quickly to implement the grants until the December 2008 "stop work" directive from the DOF for bond projects. The FY2009-10 Budget appropriates an additional \$500 million to ARB for this Program. ARB plans to initiate the public process in 2010 to allocate these funds to local agencies by the June 2010 deadline, with project starts contingent on availability of the cash to implement.

Implementation of FY2007-08 Funds. In late Spring 2009, ARB received \$111 million in upfront proceeds from the March and April 2009 bond sales. ARB sent letters to local agencies on June 26, 2009 authorizing them to restart a subset of the FY2007-08 grants. These local agencies continued grant implementation, including evaluating project applications and equipment, competitively ranking eligible applications, signing contracts, and funding completed projects. In late 2009, ARB received over \$139 million from the October 2009 bond sales. Once the State Treasurer's Office authorizes ARB to spend these funds based on approved tax compliance certificates, ARB will notify the local agencies in January 2010 to restart work on the remaining suspended grants. ARB has now received all project funds for local agencies to pay to equipment owners, but still needs \$9 million to cover the remainder of administrative costs. To date, ARB has paid out over \$100 million to local agencies, primarily for truck projects. Despite the bond delays, we expect the local agencies to successfully obligate and pay out funds for all grants within the statutory time frames.

Results for FY2007-08 Funds. The local agencies expect to have over 2,400 old trucks scrapped and 3,000 new and retrofitted trucks operational in the first half of 2010, with another 2,100 new and retrofitted trucks ready before the end of 2010. We estimate that for these identified projects they will reduce over 2.3 million pounds of particulate matter (PM) and 40 million pounds of nitrogen oxides (NOx). The reductions shown below reflect data on the specific trucks funded for three early grants that are nearly complete, and default data for the remaining grants that are still in progress. When the truck projects are complete, the emission reductions are likely to be greater because the trucks in the funding queue are substantially older and/or drive higher miles than the default values. We will update the results in subsequent reports.

LOS ANGELES/INLAND EMPIRE TRADE CORRIDOR

Local Agency	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM	NOx	
South Coast Air Quality Management District	Replace old dirty trucks serving the Ports of Los Angeles and Long Beach with new clean models. (G07GMLP1)	\$6,930,000	77,000	1,583,000	District selected projects for funding, signed contracts with truck owners, and clean trucks began operation prior to the Program suspension. On June 26, 2009, ARB authorized the District to resume any remaining work. District has completed the grant with 132 old trucks scrapped and replaced with new natural gas trucks.
	Retrofit trucks with soot filters and replace old dirty trucks with new clean models. (G07GMLT1)	\$6,877,500	109,000	1,695,000	District selected projects for funding, signed contracts with truck owners, and some of the new trucks were operational prior to the Program suspension. On June 26, 2009, ARB authorized the District to resume any remaining work. District has completed the grant with 131 old trucks scrapped and replaced with new trucks.
	Retrofit trucks serving the rail yards with soot filters. (G07GMLP2)	\$2,625,000	15,000	315,000	District was in the process of selecting projects for funding prior to the Program suspension. On June 26, 2009, ARB authorized the District to restart this grant. District is in the final phases of implementation and expects to have 60 new or retrofitted trucks operational by April 2010.
	Retrofit trucks with soot filters and replace old dirty trucks with new clean models. (G07GMLT2)	\$18,322,500	148,000	3,175,000	District was in the process of selecting projects for funding prior to the Program suspension. ARB expects to authorize restart of this grant in January 2010.
	Replace old dirty locomotives at rail yards with new clean models. (G07GMML1)	\$3,090,000	71,000	1,394,000	District was in the process of soliciting locomotive projects prior to the Program suspension. ARB expects to authorize restart of this grant in January 2010.

LOS ANGELES/INLAND EMPIRE TRADE CORRIDOR (continued)

Local Agency	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM	NOx	
Ports of Los Angeles & Long Beach	Replace old dirty trucks serving the Ports of Los Angeles and Long Beach with new clean models.				The Ports selected the first round of projects for funding, signed contracts, and used their own funds to get some new trucks in operation prior to Program suspension. ARB approved the Ports' request to transfer administration of the grant to the South Coast District, with the Port of Long Beach processing the remainder of the trucks from their solicitation. ARB and two ports amended the original grant agreement accordingly.
Port of Long Beach	(G07GMLP3)	\$3,550,000	20,000	443,000	On September 23, 2009, ARB authorized the Port to restart the grant with up to \$3,550,000 in Program funds for truck replacements. The Port is in the final phases of implementation and expects to have 70 replacement trucks operational by April 2010.
South Coast Air Quality Management District	(G07GMLP3-03)	\$94,447,500	526,000	11,573,000	On September 29, 2009, ARB executed a grant agreement with the District to administer the remainder of the original funds, adjusted to fund a whole number of trucks, at \$94,447,500. Concurrently, ARB authorized the District to proceed with implementation of \$45,450,000 in project funds. ARB expects to authorize the District to use the remainder of the project funds in January 2010. District expects to have about 1,350 replacement trucks operational by April 2010, with another 450 ready before the end of 2010.
Corridor Total		\$135,842,500	966,000	20,178,000	

CENTRAL VALLEY TRADE CORRIDOR

Local Agency	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM	NOx	
San Joaquin Valley Air Pollution Control District	Retrofit trucks with soot filters and replace old dirty trucks with new clean models. (G07GMCT1)	\$5,701,500	359,000	2,030,000	District selected projects for funding and began signing contracts prior to Program suspension. On June 26, 2009, ARB authorized the District to resume the remaining work. District completed 70 projects and expects up to 119 new or retrofitted trucks to be operational in 2010.
	Retrofit trucks with soot filters and replace old dirty trucks with new clean models. (G07GMCT3)	\$40,530,000	287,000	7,421,000	District began the process of selecting projects for funding prior to the Program suspension. On June 26, 2009, ARB authorized the District to restart this grant with up to \$18,850,150 in project funds. ARB expects to authorize the District to use the remainder of the project funds in January 2010. District expects to have nearly 800 new or retrofitted trucks operational in 2010.
Sacramento Metropolitan Air Quality Management District	Replace old dirty trucks with new clean models. (G07GMCT2)	\$840,000	6,000	154,000	District had selected projects for funding prior to Program suspension. District declined to accept project funding from April 2009 bond proceeds until local administrative funding is also available. ARB expects to authorize restart of this grant in January 2010.
	Retrofit trucks with soot filters and replace old dirty trucks with new clean models. (G07GMCT4)	\$4,462,500	41,000	724,000	District was in the process of soliciting project applications prior to Program suspension. District declined to accept project funding from April 2009 bond proceeds until local administrative funding is also available. ARB expects to authorize restart of this grant in January 2010.
	Replace old dirty long-haul locomotives with new clean models. (G07GMCL1)	\$10,300,000	275,000	2,749,000	District was in the process of selecting projects for funding prior to Program suspension. ARB expects to authorize restart of this grant in January 2010.
Corridor Total		\$61,834,000	968,000	13,078,000	

BAY AREA TRADE CORRIDOR

Local Agency	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM	NOx	
Bay Area Air Quality Management District	Install grid-based shoreside electrical power at 3 ship berths at the Port of Oakland so ships can plug in and turn off their engines while docked. (G07GMBS1)	\$2,856,000	16,000	1,604,000	District had signed contract with marine terminal operator and began work prior to Program suspension. On June 26, 2009, ARB authorized the District to restart this grant. The project is proceeding and the contractor will be requesting proposals for construction from bidders. Project is on schedule for completion by mid-2011.
	Retrofit drayage trucks serving the Port of Oakland or replace them with new clean models. (G07GMBP1)	\$14,121,094	189,000	1,375,000	District was in the process of selecting projects for funding prior to Program suspension. On June 26, 2009, ARB authorized the District to restart this grant with up to \$10,505,804 in project funds, which includes monies redirected from the harbor craft grant. In late December 2009, the District also asked ARB to redirect funds from the locomotive grant to port trucks. ARB expects to authorize the District to use the remainder of the project funds in January 2010. District expects to have 1,170 new or retrofitted trucks operational by April 2010. Note: On December 31, 2009, ARB pledged \$8 million from the FY2009-10 appropriation to fund an additional 1,300 trucks.
	Retrofit trucks with soot filters and replace old dirty trucks with new clean models. (G07GMBT1)	\$17,377,500	131,000	3,098,000	District was in the process of selecting projects for funding prior to Program suspension. ARB expects to authorize restart of this grant in January 2010. District expects to have roughly 400 new or retrofitted trucks operational in 2010.
	Replace old dirty engines in harbor craft with new clean engines. (G07GMBH1)	\$0	0	0	Grant terminated and \$4,263,844 in funds transferred to the existing port truck grant, at the District's request.
	Replace old dirty locomotives at rail yards with new clean models. (G07GMBL1)	\$0	0	0	Grant terminated and \$3,090,000 in funds transferred to the existing port truck grant, at the District's request.
Corridor Total		\$34,354,594	336,000	6,077,000	

SAN DIEGO/BORDER TRADE CORRIDOR

Local Agency	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM	NOx	
San Diego Air Pollution Control District	Retrofit trucks with soot filters and replace old dirty trucks serving the Port of San Diego with new clean models. (G07GMSP1)	\$0	0	0	District was in the process of selecting projects for funding prior to Program suspension. On June 26, 2009, ARB authorized the District to restart this grant. Due to the withdrawal of all eligible trucks, ARB approved the District's request to transfer \$651,000 from this early grant to its main grant for port trucks (G07GMSP2).
	Replace old dirty trucks serving the Port of San Diego with new clean models. (G07GMSP2)	\$3,013,500	19,000	617,000	District was soliciting for truck projects prior to Program suspension. On June 26, 2009, ARB authorized the District to restart this grant. District expects to have nearly 60 replacement trucks operational in 2010.
	Retrofit trucks with soot filters and replace old dirty trucks with new clean models. (G07GMST2)	\$5,302,500	42,000	926,000	District was soliciting for truck projects prior to Program suspension. ARB expects to authorize restart of this grant in January 2010. District expects to have over 100 new and retrofitted trucks operational in 2010.
Port of San Diego	Install grid-based shore side power at a ship berth at the Port of San Diego so ships can plug in and turn off their engines. (G07GMSS1)	\$2,500,000	pending transfer – new benefits to be determined	pending transfer – new benefits to be determined	The Port was soliciting for shore power projects prior to Program suspension. District's intended shipping partner withdrew and no other viable project exists. ARB will terminate this grant and transfer the funds to an existing truck grant in the same trade corridor.
Imperial County Air Pollution Control District	Retrofit trucks with soot filters and replace old dirty trucks with new clean models. (G07GMST3)	\$3,748,500	29,000	656,000	District was in the process of selecting projects for funding prior to Program suspension. On June 26, 2009, ARB authorized the District to restart this grant. District expects to have nearly 100 new and retrofitted trucks operational in 2010.
Corridor Total		\$14,564,500	90,000+	2,199,000+	

TOTALS

	Grant Amount	Emission Reductions (pounds)	
		PM	NOx
Total Grants to Local Agencies	\$246,595,594	Greater than 2,360,000	Greater than 41,532,000
ARB administration costs	\$3.4 million		
Total FY2007-08 Funds	\$250 million		