PROPOSITION 1B:
GOODS MOVEMENT EMISSION REDUCTION PROGRAM

Proposed Update to Guidelines for Implementation
STAFF REPORT

Board Consideration: June 25, 2015

California Environmental Protection Agency

Air Resources Board

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DOCUMENT AVAILABILITY

Electronic copies of this document and related materials can be found at: http://www.arb.ca.gov/gmbond. Alternatively, paper copies may be obtained from the Air Resources Board's (ARB) Public Information Office, 1001 I Street, 1st Floor, Visitors and Environmental Services Center, Sacramento, California, 95814, (916) 322-2990.

If you need this document in an alternative format (i.e., Braille, large print) or another language, please contact Mr. Chris Schlagel at (916) 322-8382 or christopher.schlagel@arb.ca.gov. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

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ONGOING CLARIFICATION OF PROGRAM REQUIREMENTS

ARB staff clarifications regarding specific issues that may arise after publication of the final Guidelines will be made available on the Program website to assist with implementation.

DISCLAIMER

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

The Proposition 1B: Goods Movement Emission Reduction Program (Program) is continuing to fulfill its mandates to reduce diesel emissions and health risk in heavily impacted communities and to help attain federal air quality standards. Program funds have put about 12,000 cleaner trucks on the road in California, in addition to projects that have reduced emissions from ships at berth, locomotives and commercial harbor craft. These projects will reduce over 2,200 tons of fine particulate matter (PM2.5) and over 85,000 tons of nitrogen oxides (NOx) over their lifetime.

This Staff Report discusses the proposed update to the Program Guidelines for Implementation (Guidelines). These Guidelines define the procedures for the Air Resources Board (ARB or Board) and local agencies to administer the Program, as well as the specifications for eligible projects.

To inform these Guideline updates, ARB staff considered the goals of the Sustainable Freight: Pathways to Zero and Near-Zero Emissions Discussion Draft as well as the Draft Heavy Duty Technology and Fuels Assessment: Overview. Staff also worked with local agencies to identify changes in the Program to increase its effectiveness. The proposed updates are critical to: expand the Program to include cleaner options, streamline the requirements for applicants, and ensure State funds are being used for cost-effective projects.

Key Updates

- Significant funding and longer grant timelines for zero and near-zero emission technology projects across all sectors
- Funding for infrastructure to support zero emission trucks, transport refrigeration units and cargo-handling equipment
- Continued commitment to small fleets

Along with changes in available technology, compliance obligations are evolving. One of the principal Program requirements is that the projects must achieve emission reductions "not otherwise required by law or regulation." Since many ARB regulatory deadlines are now in effect; there are fewer projects that provide early emission benefits and they are providing lower benefits than before. This ARB staff proposal continues to fund conventional projects for small truck fleets, but it also increases the options and funding amounts for hybrid, low-NOx, and zero emission equipment. These projects provide additional emission benefits by going beyond the current regulatory requirements, helping to advance needed transformative technology, and providing greenhouse gas reductions.

ARB staff is recommending that the Board revise the statewide category funding targets. The proposal would re-allocate the targets to align with the interest and demand for the funding categories and would expand the funding categories to include transportation refrigeration units.

ARB staff recommends that the Board adopt the proposed updates to the Guidelines.

I. EXISTING PROGRAM

A. Program Basics

1. How do freight operations impact air quality and public health?

The engines in trucks, locomotives, ships, harbor craft, and cargo handling equipment are major contributors to the State's pollution challenges. These sources account for nearly half of the statewide particulate matter (PM) emissions. PM is both a toxic air contaminant and a contributor to black carbon, a powerful short-lived climate pollutant. Emissions from freight transport also account for over one third of the statewide nitrogen oxides (NOx) which form fine particles.

Freight-related emissions are a public health concern at both the community and regional 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. In order to meet California's overall toxic, air quality and climate objectives, the Program must show support for advanced technologies, with the expectation that robust funding will speed up and broaden the commercialization of zero and near-zero technologies.

2. What is the Goods Movement Emission Reduction Program?

Proposition 1B, approved by voters in 2006, authorized $1 billion in bond funding to ARB to cut freight emissions in the four priority trade corridors. These corridors are: the Los Angeles/Inland Empire, the Central Valley, the Bay Area, and the San Diego/Border area. Health and Safety Code section 39625 et seq. (shown as Appendix A) establishes the Proposition 1B: Goods Movement Emission Reduction Program (Program) and directs ARB to maximize the emission reduction benefits while achieving the earliest possible health risk reduction in communities heavily impacted by goods movement. Executive Order S-02-07, issued by Governor Schwarzenegger, provides further direction to ensure accountability and transparency in administering bond-funded programs.

The Program provides financial incentives to owners of equipment used in freight transport to upgrade to cleaner technologies that reduce PM and NOx emissions, as well as greenhouse gases in some cases. The source categories eligible for bond funding include heavy-duty diesel trucks, transport refrigeration units, freight locomotives, cargo ships at berth, commercial harbor craft, cargo handling equipment, and infrastructure for electrification of truck stops, freight facilities, and other places trucks congregate.

3. How does the Program work?

ARB awards funding to local agencies (such as air districts and ports). Those agencies then use a competitive process based on emission reductions and cost-effectiveness to provide incentives to equipment owners to upgrade to cleaner technology.

The Program supplements ARB's diesel regulations by funding early compliance or providing extra emission reductions beyond those required by applicable rules or enforceable agreements. The Proposition 1B ballot initiative specifically directs that ARB use the funds to achieve emission reductions "not otherwise required by law or regulation."

Reductions must be early or extra

Key existing ARB rules/requirements

- Statewide Truck and Bus Rule
- Drayage Truck Rule
- Truck Idling and Refrigeration Unit Rules
- Ship Fuel and At-Berth Rules
- Harbor Craft Rule
- Cargo Handling Equipment Rule
- Regulation for In-Use Off-Road Diesel Fueled Fleets

4. What are the Program Guidelines?

As required by State law, the Board adopted the initial Guidelines in February 2008; and approved updates in March 2010, and in January 2013. The Guidelines define the responsibilities of ARB, local agencies, and equipment owners, as well as the technical specifications and funding amounts for eligible projects. Modifications to the Guidelines made via Executive Order after January 2013 are incorporated in this update and are available on the Program website: http://www.arb.ca.gov/gmbond.

5. How is the Program funded?

Funds for the Program are appropriated through the budget process, which authorizes ARB to use a specific amount of funding within statutory timeframes. Because the appropriation does not provide any cash, the Program relies on the State to sell bonds or commercial paper.

ARB provides input to the Department of Finance regarding the Program's cash needs; however, ARB staff cannot predict the schedule for future bond sales or the availability of upfront proceeds for this purpose; only after a successful bond sale is ARB staff notified of the specific dollar amount to be made available. Proceeds are then transferred into ARB's Program account, the State Treasurer's Office issues a tax compliance certificate for ARB signature, and approves the signed certificate. ARB then has the authority to spend those monies.

6. What are the match funding requirements?

Consistent with clear directives in the implementing legislation, the Program uses State bond funding to leverage other monies to achieve the greatest emission reductions per State dollar. By limiting the amount of Program funds available for each project, the number of individuals, businesses, and ports able to access those funds, as well as the resulting air quality benefits, are maximized.

While the Guidelines cap the maximum amount of bond funding for each project type, they do not require a fixed match ratio and they do not specify who must pay the remainder of the project cost. To provide flexibility, projects can be co-funded through a combination of private, federal, other State, and/or local sources.

B. Program Implementation

1. What is the status of grant funds?

The local agencies have been awarded over $700 million for projects and administrative costs for all of the funding categories: heavy duty trucks, locomotives, shore power and cargo handling equipment, and harbor craft. They have completed the Year 1 through Year 3 grants with all projects operational. Year 4 projects are being implemented by the local agencies with the remaining projects expected to be operational by fall 2015. Appendix B, *December 2014 Semi-Annual Status Report* provides an update on each grant.

2. What results and benefits has the Program produced so far?

Projects: The local agencies have completed the truck projects from Year 1 through Year 3 with more than 9,500 cleaner trucks operating in the four priority trade corridors. Year 4 projects are in progress; staff anticipates approximately 4,000 trucks will be upgraded with cleaner equipment. Local agencies with port operations have installed electrical power for 37 ship berths and local agencies contracting with rail operators have upgraded 25 locomotives. One harbor craft project was completed and operational in 2013, and two more are currently under contract.

Benefits: When fully implemented, staff expect projects included in this report to reduce over 4.4 million pounds or 2,200 tons of PM 2.5, plus over 170 million pounds or 85,000 tons of NOx. Emission reductions for projects funded through 2013 are calculated over the life of their grant term (e.g., 2 to 5 years for trucks and 10 years for ships at berth). Emission reductions for the Year 4 grants take into consideration ARB's regulations and include only the portion of the emission reductions that are early or extra to these regulations.

II. PROPOSED CHANGES TO THE PROGRAM

A. Development and Schedule

1. What outreach has ARB staff done to develop this proposed update?

The implementation of the Program has necessitated close communication between ARB staff and the local agencies. Based on this working experience, information obtained during implementation, feedback from local agencies and equipment owners, as well as information from the Sustainable Freight Draft and the Technology Assessment Draft, ARB staff proposed changes to the Program which were discussed in the April 2015 Staff Draft Concept Paper.

ARB held three public workshops in Sacramento, the Central Valley, and Southern California in April 2015 to solicit input from local agencies, the trucking industry, railroads, shippers, equipment manufacturers, and environmental representatives. ARB staff also received written comments from stakeholders. The proposed update to the Guidelines incorporates many of the suggestions received as a result of ARB's outreach efforts.

2. What is the tentative schedule for the next funding awards?

The tentative schedule for ARB and local agency actions to implement projects for the remaining funds in FY2015-16 is shown below. This schedule is tentative and subject to change and may be accelerated if necessary:

July 2015	Notice of Funding Availability: Should the Board approve the updated Program Guidelines, ARB staff will issue a Notice of Funding Availability to solicit local agency project proposals.
July 2015	Local agency project applications: Local agencies will submit proposals (by funding category) to ARB to implement incentives for eligible projects.
August - September 2015	Public review and ARB staff evaluation of proposals: ARB will review and post eligible applications on the Program website. ARB staff will evaluate eligible applications based on criteria in the Guidelines, recommend projects for funding, and hold public workshops.
September 2015	Local agency project awards: The Board will hold a public hearing to consider the recommended funding awards for specific primary and backup local agency projects. Any awards must be consistent with State fiscal policy and contingent on the availability of funding.

October 2015 and later

Agreements with local agencies: ARB staff will execute grant agreements with the local agencies, based on the list of primary and backup projects approved by the Board. The execution of the grant agreements starts the statutory time clock for local agencies to obligate funds through an executed equipment project contract.

Equipment owner applications and awards: After solicitation and evaluation of applications for equipment projects, local agencies will select eligible projects per the Guideline requirements. Local agencies will then execute contracts with equipment owners to fund projects. Solicitations may be held prior to award of funds and/or executed grant agreements if approved by ARB staff.

Installation/Deployment of cleaner technology: As project contracts are executed, equipment owners will begin purchasing and installing cleaner equipment.

3. What are the priorities for Year 5 funds?

The proposed update to the Guidelines supports the transition to the cleanest technologies, offers critical support to small truck fleets (as directed by the Board), and increases project options that provide additional emission benefits. The proposed changes are based in part from stakeholder input and comments received on the Staff Draft Concept Paper released in April 2015.

ARB staff is proposing that the Board adopt the following priorities for Year 5 funds:

- Truck projects to upgrade equipment to zero emission and hybrid vehicles capable of zero emission miles, as well as vehicles certified to the lowest optional nitrogen oxides (NOx) standard. These projects receive priority and enhanced funding, which will provide an added incentive to applicants and promote the transition to the cleanest technology. These projects will continue to reduce the health risk in communities statewide, especially those near freeways, freight facilities, and border crossings. In addition, these projects represent a vital investment to help attain federal and State health-based air quality standards.

- Truck projects to assist small fleets with upgrading to cleaner technology, which is consistent with previous Board direction to provide funding for small fleets that can still achieve early or extra emission reductions relative to the Statewide Truck and Bus Regulation.

- Projects to upgrade trucks, transport refrigeration units, commercial harbor craft, ships at berth, and cargo handling to zero and near-zero emission equipment through replacement, repower, and retrofit, as applicable. A broader deployment of these technologies will be needed in the South Coast and San Joaquin Valley Air Basins to attain health-based air quality standards as well as attain future long-term greenhouse gas reduction goals.

- Locomotive projects based on engines meeting the most stringent national emission standards. These projects will further reduce the health risks near railyards and assist in the attainment of federal PM2.5 and ozone air quality standards for the South Coast and San Joaquin Valley Air Basins.

Stakeholders have raised concerns that there will not be sufficient funds available for all project options. Truck projects, in general, have received significant applications when solicitations are held. However, historically as the applications proceed through the grant process, projects fall out leaving funds available for other projects. Staff believes that there will be sufficient funds to meet the proposed priorities.

B. Equipment Project Specifications

The specifications for eligible projects are an integral part of the update to the Guidelines. 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. Project specifications reflect the results of staff evaluation.

In the 2013 update to the Guidelines, enhanced and new funding was provided for advanced technologies to encourage equipment owners to purchase the cleanest available equipment. This update continues that transition by proposing to provide much higher funding levels for zero and near-zero emission technologies. These proposed changes are needed to maximize the opportunities to foster new technologies and new equipment types that support the air quality and climate needs and goals of the State.

1. What is the basis for the truck project options?

Trucks are subject to the Statewide Truck and Bus Rule (Rule), which was amended by the Board in April 2014. To determine which projects will be eligible for Program funds, ARB staff reviewed the compliance deadlines to ensure that emission reductions would be "early or extra." ARB staff identified funding opportunities for both large and small truck fleets, if the fleets maintain compliance with the Rule requirements.

Staff is proposing that most funding opportunities will be for newer technology, but the Program will continue to offer conventional upgrades for small truck fleets. Additionally, ARB staff recommends significant funding for truck owners willing to upgrade to new technologies such as low-NOx (emitting no more than 0.02 grams of NOx per brake horse power-hour (g/bhp-hr)), zero emission trucks, and hybrid trucks capable of zero emission miles.

Trucks eligible for upgrade are class 6, 7 and 8 with model year (MY) 2009 or older heavy duty diesel engines. The trucks must be used to transport goods (as defined by the Program) a majority of the time, and operate at least 50 percent in the four trade corridors.

Table 2a: Proposed Equipment Project Options for Trucks

Eligible Upgrade		Proposed Program Funding			Project Life
All Fleets: Equipment[1]		**Class 6**	**Class 7**	**Class 8**	
A	Replace with new MY2015+ engine zero emission truck.[2,3,4]	$100,000	$200,000	$200,000	5 Years
B	Replace with new MY2015+ engine hybrid zero emission mile truck.[2,3,5]	$65,000	$150,000	$150,000	
C	Replace with new MY2015+ engine optional low-NOx truck (0.02 g/bhp-hr or less).[2,3]	$50,000	$100,000	$100,000	
D	Replace with MY2015+ engine hybrid truck.[2,3,6]	$45,000	$80,000	$80,000	
E	Replace with a new MY2015+ engine natural gas truck[2,3,7]	$40,000	$65,000	$65,000	
F	Three-way truck transaction: (1) Replace MY2007-2009 engine truck with new MY2015+ engine truck as described above.[2,3,4,5,6] (2) Reuse MY2007-2009 engine truck. (3) Scrap old truck with MY2006 or older engine.	Same funding amount for replacements shown above			5 years for new truck
Small Fleets: Equipment[1]		**Class 6**	**Class 7**	**Class 8**	5 years
G	Replace with a used MY2011+ engine truck.[3,7]	N/A	$35,000	$40,000	
H	Replace with a new MY2015+ engine truck. [3,7]	$25,000	$45,000	$60,000	
I	Repower with a new MY2015+ diesel engine.[7]	$10,000	$20,000	$20,000	
J	Three-way truck transaction: (1) Replace MY2007-2009 engine truck with new MY 2015+ engine truck.[7] (2) Reuse MY2007-2009 engine truck. (3) Scrap old truck with MY2006 or older engine.	$25,000	$45,000	$60,000	5 years for new truck

[1]Eligible trucks with MY2009 or older heavy duty engines.
[2]Projects may be co-funded with Air Quality Improvement Program, Low Carbon Transportation Program, or Alternative Renewable Fuel Vehicle Technology Program funds as applicable.
[3]Co-funded projects can only utilize one additional source of State funding and the combined funding may not exceed 90% of the total eligible project cost or any other funding restrictions of each respective program. Projects must meet the requirements of each program providing funding.
[4]Zero emission truck is defined as a vehicle that emits no criteria pollutant, toxic or greenhouse gas emissions at the tailpipe.
[5]Hybrid zero emission mile truck is defined as a hybrid vehicle capable of zero emission miles.
[6]Hybrid truck is defined as a vehicle with an electric drive system powered by an on-board generator and eligible for funding by AQIP.
[7]Engines must meet the 2010 emission level of 0.20 g/bhp-hr or less NOx and 0.01 g/bhp-hr or less PM and be certified by ARB.

Table 2b: Proposed Equipment Project Options for Truck Infrastructure

Eligible Upgrade		Proposed Program Funding	Project Life
K	Electrification infrastructure for a truck stop to reduce diesel engine use	Lower of 50 percent of eligible costs or a funding level that provides a cost-effectiveness of 0.10 lbs/State $	10 years
L	Infrastructure for electric charging stations with replacement of a minimum of three electric trucks[1]	Lower of 50 percent of eligible cost or $90,000 plus funds for the replacement of 3 trucks.	
M	Infrastructure for fuel cell fueling stations with replacement of a minimum of three fuel cell trucks[2]	Lower of 50 percent of eligible cost or $90,000 plus funds for the replacement of 3 trucks.	

[1]Funding for charging stations is only available with the replacement of a minimum of three electric trucks.
[2]Funding for fueling stations is only available with the replacement of a minimum of three fuel cell trucks.

2. What co-funding is available for truck projects?

In addition to Program funds, advanced technology projects may be eligible to obtain funding from other State sources that are intended to reduce greenhouse gases which include ARB's Air Quality Improvement Program (AQIP) and the Low Carbon Transportation Program (LCTP), and the California Energy Commission's (CEC) Alternative and Renewable Fuel and Vehicle Technology Program (ARFVT). Program funds may be combined with only one of these State funding sources. The total State funding for co-funded projects cannot exceed 90 percent of the total eligible project cost. Co-funded projects must meet the requirements of both programs including any limitations on maximum funding.

3. How does the implementation of truck projects provide early or extra emission reductions compared to the Statewide Truck and Bus Rule?

Truck replacement projects funded with Year 5 monies are expected to become operational in 2016-2017. This timeframe allows early reductions to occur before the final compliance deadlines of the Rule; all heavier trucks must be MY2010 or later (including NOx) by 2023. Staff is proposing that equipment owners purchase equipment that is cleaner than what the Rule requires. Zero emission, low-NOx, and hybrid vehicles provide "extra" emissions and spur the development of new technology. Near-term NOx reductions are needed beyond those achievable with conventional trucks, which is critical for attainment in the South Coast and San Joaquin Valley air basins.

4. What Program changes are recommended for truck projects and how do these adjustments help the State achieve its air quality goals?

- Expand the equipment options to include funding for low-NOx (0.02 g/bhp-hr) and hybrid zero emission mile trucks. Staff is also proposing to increase the funding level for hybrid and zero emission truck projects that are currently eligible for funding. Expanding the equipment options as well as paying a greater share of the cost for equipment to help offset the higher cost will provide more flexibility and greater incentive for equipment owners to upgrade equipment beyond regulatory requirements. Funding priority will be given to applications for low-NOx and hybrid zero emission mile trucks, along with zero emission trucks which are currently prioritized.

- Add a new project option to offer funding for the installation of electric charging and fuel cell fueling stations in conjunction with the purchase of electric or fuel cell trucks. Funding for fueling infrastructure is needed to support the deployment of zero emission trucks.

- Expand eligibility requirements to include trucks with MY2007-2009 diesel engines and seek to make them available for reuse. Equipment owners choosing this option must purchase a new advanced technology or alternative fuel truck or a new diesel truck (small fleets only). This will provide emission reductions in impacted communities and opportunities for additional near-term NOx reductions. This will also open funding to drayage trucks, which are good candidates for advanced technology and alternative fuel vehicles. These model-year trucks will be made available for reuse to truck owners that want to upgrade their old compliant trucks to cleaner models. ARB will work with the local agencies and the California Air Pollution Control Officers Association to develop the specifics of the reuse program.

- Remove the 1997 and 1998 engine model year trucks from the Class 6 funding options. Due to the compliance deadlines under the Rule for Class 6 trucks, there is no opportunity to achieve early or extra emission reductions for these model years.

- Change the engine model years eligible to participate in the three-way truck option to trucks with MY2007 to 2009 engines for the truck to be replaced, and MY2006 engine and older for the truck being scrapped. This change aligns with the requirement for the replacement option that MY2006 and older trucks be scrapped.

- Increase the funding level for new 2015 engine model year Class 7 and 8 trucks for small fleets. These trucks have increased on-board diagnostic requirements that will better ensure lower emissions throughout the project life.

- Limit funding options for large fleets to zero emission, near-zero emission advanced technology equipment, or alternative fuel vehicles. In order to meet the federal health-based air quality standards in the State Implementation Plan and climate change goals, California must achieve significant reductions. Incentive funds are

needed to accelerate deployment and provide strong market support for advanced technologies and increase the use of a diverse set of cleaner fuels to support this goal. Therefore, funding options available to large fleets are focused on advanced technologies and alternative fuel vehicles.

- Retain the option for small truck fleets to upgrade their truck with a used truck with an engine that meets the MY2010 emission standard. Maintaining this option allows small truck fleets to continue to participate in the Program and supports the Board's prior direction to provide funding for small truck fleets that can still achieve early or extra emission reductions.

- Extend the timelines for advanced technology projects to allow access to newly commercialized equipment. Hybrid and zero emission trucks are becoming available at a faster rate. Trucks with engines certified to the most stringent optional low-NOx standard could be available within the next one to two years. For those vehicles that are not commercially available now, this strategy is intended to create early customer demand for the technology and accelerate availability from manufacturers.

5. What is the basis for the Transport Refrigeration Unit (TRU) project options?

Staff is proposing to create a new funding category to support the transition of transport refrigeration equipment to zero or near-zero emission technology. The latest models of commercialized transport refrigeration units (TRUs) have the option of being equipped with the ability to plug into electric infrastructure and eliminate emissions for up to several hours when parked. However, even with the latest hybrid electric and electric standby technology, many of these systems are not plugged into the grid due to a lack of infrastructure at freight facilities. Staff has added project options to help address this need.

Table 3: Proposed Equipment Project Options for Distribution Centers/TRUs

Eligible Equipment		Equipment Upgrade	Proposed Program Funding	Project Life
A	Existing trucks or trailers equipped with diesel TRUs.	Replace an existing TRU with a zero emission transport refrigerator (e.g. all-electric or fuel cell).	Lower of 80 percent of eligible cost or $50,000.	5 years
B	Existing freight facilities where trucks or trailers equipped with TRUs congregate.	Infrastructure and equipment to install 10 electric power plugs that are compatible with electrically powered TRUs (e.g. all-electric, hybrid electric, or electric standby-equipped) at freight facilities.[1]	Lower of 50 percent of eligible cost or $30,000 for all 10.	5 years
C	Existing trucks or trailers equipped with diesel TRUs.	Replace 5 existing TRUs with 5 zero emission cryogenic transport refrigerators.[2]	Lower of 80 percent of eligible cost or $100,000 for all 5.	5 years
D	Existing freight facilities where trucks or trailers equipped with TRUs congregate.	Infrastructure and equipment to install cryogenic refrigeration fueling station at freight facilities.	Lower of 50 percent of eligible cost or $100,000.	5 years

[1]Additional single plugs may be funded at the lower of 50 percent of the eligible cost or $3,000 per plug.
[2]Additional cryogenic transport refrigerators may be funded at the lower of 80% of the cost or $20,000 per transport refrigerator.

6. What project types will be offered for TRU funding?

- Funding for the replacement of an existing conventional TRU with an all-electric or fuel cell transport refrigerator. Currently, limited zero emission TRU technology is available; staff anticipates the proposed funding levels will incentivize manufacturers to make additional zero emission TRU technology available.

- Funding for the purchase and installation of a minimum of ten electric power plugs for TRUs at freight facilities and subsequent replacement of TRUs. To deploy new TRU technology successfully, investment in infrastructure is needed. Requiring a minimum of ten electric power plug installations per project promotes wider use, decreases overall installation costs, and promotes cost savings for the end user.

- Funding for replacement of a minimum of five existing conventional TRUs with five cryogenic transport refrigerators. These systems use cryogenic liquid cooling to transport refrigerated goods, which eliminates emissions by replacing the need for a conventional TRU.

- Funding for the purchase and installation of cryogenic fueling infrastructure. To further the deployment of zero emission cryogenic transport refrigerators, investment in fueling infrastructure is needed.

7. What is the basis for the locomotive project options?

The proposed changes to the project options include providing a higher amount of Program funding for the introduction of locomotives meeting the U.S. Environmental Protection Agency's (U.S. EPA) Tier 4 emission standards. Staff is proposing to maintain the requirement to upgrade to the cleanest technology. To incentivize the purchase of Tier 4 equipment, staff is proposing modifications that include expanding equipment eligibility, higher funding levels, and flexibility of California operation.

Table 4a: Proposed Equipment Project Options for Switcher and Medium-Horsepower Locomotives

Eligible Equipment		Equipment Upgrade	Proposed Program Funding[1]			Project Life
			Operational in 2016	Operational in 2017	Operational in 2018 or later	
A	Switcher *(1,006 2,300 hp)* Uncontrolled through Tier 2 diesel freight locomotive.[2]	Replace or retrofit with new engine OR install alternative technology to meet U.S. EPA Tier 4 or lower emission standards for both NOx and PM.[3,5]	**90 percent to 100 percent CA Operation[4]**			15 years
			Lower of 85 percent eligible cost or $2.125M.	Lower of 80 percent eligible cost or $2.0M.	Lower of 75 percent eligible costs or $1.875M.	
B	Medium-horsepower locomotive *(2,301-4,000 hp)* Uncontrolled through Tier 2 diesel freight locomotive.[2]	Replace or retrofit with new engine OR install alternative technology to meet U.S. EPA Tier 4 or lower emission standards for both NOx and PM.[3,5]	**90 percent to 100 percent CA Operation[4]**			15 years
			Lower of 85 percent eligible cost or $2.55M.	Lower of 80 percent eligible cost or $2.40M.	Lower of 75 percent eligible costs or $2.25M.	

[1]If the old equipment is banned from California operation instead of scrapped; the proposed funding amount is reduced by 20 percent.
[2]References to engine "Tier" mean the applicable emission standards established by the U.S. EPA.
[3]Tier 4 is defined as 1.3 g/bhp-hr or lower NOx and 0.03 g/bhp-hr or lower PM and must have ARB verification.
[4]Locomotive projects applying for less than 100 percent California operation funding must have an active GPS device on both the old (if not scrapped) and new equipment, and report data annually as per Guideline requirements.
[5]Retrofit Includes rebuild, repower, remanufacture, filter installation, and all other modifications other than replacement.

Table 4b: Proposed Equipment Project Options for Line-Haul Locomotives

Eligible Equipment		Equipment Upgrade	Proposed Program Funding[1]			Project Life
			Operational in 2016	Operational in 2017	Operational in 2018 or later	
C	Line-haul locomotive *(4,001 hp or higher)* Uncontrolled through Tier 2 diesel freight locomotive.[2]	Replace or retrofit with new engine OR install alternative technology to meet U.S. EPA Tier 4 or lower emission standards for both NOx and PM.[3,5]	**90 percent to 100 percent CA Operation[4]**			15 years
			Lower of 85 percent eligible cost or $2.55M.	Lower of 80 percent eligible costs or $2.40M.	Lower of 75 percent eligible costs or $2.25M.	
			75 percent CA Operation[4]			
			Lower of 70 percent eligible cost or $2.10M.	Lower of 65 percent eligible costs or $1.95M.	Lower of 60 percent eligible costs or $1.80M.	
			50 percent CA Operation[4]			
			Lower of 45 percent eligible cost or $1.35M.	Lower of 40 percent eligible costs or $1.20M.	Lower of 35 percent eligible costs or $1.05M.	
			30 percent CA Operation[4]			
			Lower of 25 percent eligible cost or $750,000.	Lower of 20 percent eligible cost or $600,000.	Lower of 15 percent eligible cost or $450,000.	

[1]If the old equipment is banned from California operation instead of scrapped; the proposed funding amount is reduced by 20 percent.
[2]References to engine "Tier" mean the applicable emission standards established by the U.S. EPA.
[3]Tier 4 is defined as 1.3 g/bhp-hr or lower NOx and 0.03 g/bhp-hr or lower PM and must have ARB verification.
[4]Locomotive projects applying for less than 100 percent California operation funding must have an active GPS device on both the old (if not scrapped) and new equipment, and report data annually as per Guideline requirements.
[5]Retrofit Includes rebuild, repower, remanufacture, filter installation, and all other modifications other than replacement.

Table 4c: Proposed Equipment Project Options for Locomotive Infrastructure

Eligible Equipment		Equipment Upgrade	Proposed Program Funding	Project Life
D	Existing freight railyards.	Install infrastructure for a locomotive emissions capture and control system (a.k.a. hood or bonnet) that achieves a minimum control effectiveness of 80 percent for NOx and 80 percent for PM.[1]	Lower of 80 percent of eligible cost or a level with a cost-effectiveness of 0.10 lbs/State $ or higher.	10 years

[1]The hood or bonnet technology requires a 10 year warranty.

8. What adjustments are proposed for locomotive projects and how do these adjustments help the State achieve its air quality goals?

- Increase the funding level for replacement and retrofit projects that meet Tier 4 emission levels as Tier 4 standards significantly reduce PM and NOx emission and apply to new locomotives manufactured beginning in 2015.

- Offer higher funding levels for locomotive projects where equipment is scrapped; projects with equipment banned from California operation will receive 20 percent less funding than the amounts listed in Table 3a. Recognizing that locomotives have very long useful lives, the Program allows equipment owners to choose to ban the equipment from California. Staff proposes to continue to allow banning but provide higher funding to incentivize equipment owners to scrap the engine.

- Allow line-haul locomotives with less than 90 percent in-state operation to be eligible for funding but with a corresponding lower level of funding. Current Guidelines require applicants to operate at least 90 percent of the time in California. Typically, line-haul locomotives spend considerably less time in California as they are used to move freight across the United States. Staff is proposing to add funding options that recognize the lower time spent in California while expediting the introduction of Tier 4 locomotives into California and capturing significant cost-effective reductions. This proposed change does not apply to switcher or medium-horsepower locomotives.

- Expand eligible equipment to include existing Tier 2 medium-horsepower and switcher locomotives to be eligible for funding. Tier 2 line-haul locomotives are currently eligible for funding. By including Tier 2 switcher and medium-horsepower locomotives for replacement, the projects can provide up to 80 to 85 percent reduction in NOx and PM with corresponding health risk reductions in nearby communities.

- Modify the requirement for switcher locomotives to operate 90 to 100 percent of their time in the four trade corridors to 50 percent. This change would provide railroads with the flexibility to move switchers between railyards to accommodate workload. This change is consistent with the requirement for the other mobile source

categories. Additionally, the requirement to operate 90 to 100 percent in California remains therefore there is no impact on emission reductions within the State.

- Allow an exemption to the current Program requirement to "commit to the funded locomotive using only California ARB diesel fuel" for locomotives operated by BNSF Railway at the BNSF Barstow location only. Due to CARB diesel fuel regulations, all locomotives operating primarily in the State, such as switchers and medium-horsepower locomotives must be refueled with CARB diesel fuel, except those at BNSF Barstow. BNSF Railway has an exemption for this facility, which allows it to use the fuel available at Barstow, which is not 100 percent CARB diesel fuel.

- Change the minimum control effectiveness for the hood technology from 85 percent for NOx and PM to 80 percent based on the most recent test data; and increase the funding level. The changes will have a minimal effect on potential emission reductions achieved but will maintain a funding option that provides equipment owners flexibility in equipment options to reduce emissions.

9. What is the basis for the ships at berth project options?

The focus of this source category continues to be on achieving "extra" emission reductions under ARB's Ocean-Going Vessels At-Berth Rule (Shore Power Rule) as there are no remaining opportunities for early reductions. Extra reductions are available through emission reductions from vessel fleets not subject to the Shore Power Rule's control requirements.

Staff is proposing funding for berths that receive visits solely by ships not subject to the control requirements of the Shore Power Rule, and for hood or bonnet technology, which can operate at all, berths.

Staff is proposing a change to the emissions capture and control system to require a minimum control effectiveness of 80 percent for NOx and PM compared to 85 percent as currently required based on the most recent test data. The change will have a minimal effect on potential emission reductions achieved but will maintain a funding option that may provide flexibility to equipment owners.

Table 5: Existing Equipment Project Options Offered for Ships at Berth/Shore Power

Eligible Equipment		Equipment Upgrade	Proposed Program Funding	Project Life	Other Conditions (partial description)
A	Existing cargo ship berth that receives visits solely by ships not subject to the control requirements of the Shore Power Rule in effect as of 2015.	Install grid-based shore power (landside infrastructure to berth).	Lower of: 50 percent of eligible cost or $2.50M.	10 years	Ship visits must result in a cost-effectiveness of 0.10 lbs/State $ or higher.
B			Lower of: 60 percent of eligible cost or $3.50M.	10 years	Ship visits must result in a cost-effectiveness of 0.20 lbs/State $ or higher.
C	Existing cargo ship berth or terminal that receives visits solely by ships not subject to the control requirements of the Shore Power Rule in effect as of 2015.	Install non-grid-based shore power (zero emission system or natural gas engine with selective catalytic reduction).	$200,000 per megawatt.	5 years	Ports of Los Angeles and Long Beach: 1,500 hrs/yr (2015 onwards). Other ports: 1,000 hrs/yr (2015 onwards).
D	Existing cargo ship berth or terminal.	Install an emissions capture and control system (a.k.a. hood or bonnet) that achieves a minimum control effectiveness of 80 percent for NOx and for PM.[1]	Lower of 50 percent of eligible cost or a level with a cost-effectiveness of 0.10 lbs/State $ or higher.	10 years	Ports of Los Angeles and Long Beach: 1,500 hrs/yr (2015 onwards). Other ports: 1,000 hrs/yr (2015 onwards).

[1]The hood or bonnet technology requires a 10 year warranty.

10. What is the basis for the commercial harbor craft project options?

ARB's Harbor Craft Regulation requires specific vessel types to upgrade to cleaner technology over time. Staff is proposing to update the existing project options for the repower, replacement, and upgrade to cleaner systems, of commercial harbor craft, including those subject to, and not subject to in-use emission limits.

Table 6: Proposed Equipment Project Options for Commercial Harbor Craft

Eligible Equipment		Equipment Upgrade[1]	Proposed Program Funding[2]	Project Life
A	Commercial harbor craft subject to in-use emission limits: Diesel-powered tugboats, towboats with existing Tier 0, Tier 1 or Tier 2 propulsion and/or auxiliary engine(s).	Repower propulsion and/or auxiliary engine(s) OR replace vessel with new Tier 3 engine.	50 percent of eligible cost or up to $175/hp of old engine; funding level must provide a cost-effectiveness of 0.10 lbs/State $ or higher.	5 years
B	Diesel-powered work or pilot boats, marine spill response boats, oil boom boats, dive vessels supporting marine construction, shipyard work boats or commercial fishing vessels with existing Tier 0, Tier 1 or Tier 2 propulsion and/or auxiliary engine(s).	Repower propulsion and/or auxiliary engine(s) OR replace vessel with new Tier 3 engine.	85 percent of eligible cost or up to $300/hp of old engine; funding level must provide a cost-effectiveness of 0.10 lbs/State $ or higher.	5 years
C	Diesel-powered tugboats, towboats, pilot or work boats, crew and supply, marine spill response boats, oil boom boats, dive vessels supporting marine construction, shipyard work boats or commercial fishing vessels with existing Tier 2 or Tier 3 propulsion and/or auxiliary engine(s).	Repower propulsion and/or auxiliary engine(s) OR replace vessel with new Tier 4 engine.	85 percent of eligible cost or up to $450/hp of old engine; funding level must provide a cost-effectiveness of 0.10 lbs/State $ or higher.	5 years
D		Retrofit to hybrid power system or replace vessel with new hybrid powered vessel achieving at least 30 percent PM and NOx reductions.	85 percent of eligible cost or up to $380/hp of old engine; funding level must provide a cost-effectiveness of 0.10 lbs/State $ or higher.	5 years

[1]Regulated vessels upgrades must be operational at least one year before the applicable compliance date.
[2]Funding is pro-rated based on California operation.

11. What adjustments are recommended for commercial harbor craft projects and how do these adjustments help the State achieve its air quality goals?

- Increase the funding level for most project options and allow the local agency the discretion to choose between two funding levels (see Table 5 above). The proposed increased funding levels reflect the higher cost of newer engines. Offering a higher level of funding for all vessels could incentivize applicants to purchase Tier 4 engines, if available, and encourage the development of Tier 4 technologies for all vessel types. Additionally, allowing local agencies to choose between a funding cap

based on equipment cost, or an amount per unit horsepower provides flexibility to adjust to market changes; previous cost-effectiveness requirements remain in place.

- Provide funding for more freight-related harbor craft projects with potential emissions benefits. The transport of freight in California waters necessitates the presence of many vessels and engines that do not explicitly propel freight. The Program already offers funding for pilot vessels and work boats. Staff is proposing to expand funding for freight support vessels including: marine spill response boats, oil boom boats, dive vessels supporting marine construction, and shipyard work boats. Funding is also proposed for auxiliary engines, which are a necessary part of the marine freight movement fleet. In addition, baseline Tier 2 vessels seeking to upgrade to cleaner-than-required engines will be offered funding; this change will capture cost-effective, extra emissions reductions from existing Tier 2 harbor craft and encourage adoption of Tier 3 and Tier 4 engines.

- Reduce the requirement for the existing vessel to have two years of at least 75 percent operation in California waters to 51 percent. Demand for commercial harbor craft projects has been minimal due in part to the minimum operation requirement. Allowing for lower operation of the existing vessel to apply for pro-rated funding still achieves cost effective emission reductions. An active GPS device is required for operation of less than 100 percent in California waters.

- Reduce project life from eight years to five years for all project options. To date, harbor craft owners have shown little interest in using Program incentives; shorter contract requirements may be more appealing to equipment owners. This proposal provides an opportunity for more projects without a detriment to emission reductions as California's strict emission requirements for harbor craft mean that the cleanest vessels will operate in California waters throughout their useful life.

12. What is the basis for the cargo handling equipment project options?

Since the Board adopted the Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards (CHE Regulation) most compliance deadlines have passed for diesel equipment. Therefore, the upgraded equipment must move towards zero emission technology to provide "extra" emission reductions.

Staff is proposing new funding options to support the transition of diesel lifts (including forklifts, side handlers, top picks, and reach stackers) to zero emission technology as this equipment represents a significant portion of the equipment found in freight facilities. These new options will provide additional emission reductions in communities where freight facilities are located.

Table 7a: Proposed Equipment Project Options for Cargo Handling Equipment

Eligible Equipment		Equipment Upgrade[1]	Proposed Program Funding	Project Life[2]
A	Existing diesel engine rubber-tired gantry crane.	Convert or replace a rubber-tired gantry crane with a zero emission powered system.[3]	Lower of 50 percent of eligible cost or $500,000.	15 years
B	Existing diesel powered yard truck.	Replace a yard truck with a zero emission electric yard truck.	Lower of 80 percent of eligible cost or $100,000.	5 years
C	Existing diesel powered yard truck.	Convert a yard truck to a zero emission electric yard truck.[3]	Lower of 80 percent of eligible cost or $80,000.	5 years
D	Existing diesel powered yard truck.	Replace a yard truck with a zero emission fuel cell powered yard truck.	Lower of 80 percent of eligible cost or $200,000.	5 years
E	Multi-unit battery chargers with the conversion or replacement of 3 yard trucks.	Install a multiple-unit battery charger with the conversion or replacement of 3 yard trucks with zero emission electric yard trucks.[3]	Lower of 50 percent of eligible cost or $35,000 for the cost a multi-unit battery charger plus the lower of 80 percent of eligible cost or $80,000 (conversion) or $100,000 (replacement) per yard truck.	5 years

[1]Program funded equipment cannot be used to comply with the regulatory requirement for replacing non-compliant equipment with electric or zero emission equipment associated with obtaining third and/or fourth years of "No VDECS (Verified Diesel Emission Control Systems) Available" compliance extension.
[2]Program funded equipment is not eligible to be counted towards compliance for a two year period.
[3]The conversion project options require a 5 year warranty.

Table 7b: Proposed Equipment Project Options for Cargo Handling Equipment - Lifts

Eligible Equipment		Equipment Lift Capacity	Equipment Upgrade[1]	Proposed Program Funding	Project Life[2]
F	Existing diesel powered forklift.	3,000 – 8,000 lbs	Replace 3 forklifts with 3 Class I electric powered zero emission forklifts, including batteries, and chargers.	Lower of 50 percent of eligible cost or $45,000 for all 3.[3]	5 years
		8,001 – 12,000 lbs		Lower of 50 percent of eligible cost or $55,000 for all 3.[4]	
G	Existing diesel powered forklift.	3,000 – 8,000 lbs	Replace 3 forklifts with 3 Class 1 fuel cell powered forklifts including batteries, and chargers.	Lower of 50 percent of eligible cost or $75,000 for all 3.[5]	5 years
		8,001 – 12,000 lbs		Lower of 50 percent of eligible cost or $90,000 for all 3.[6]	
H	Existing diesel powered lift, including: forklift. side handler, top pick, or reach stacker.	Greater than 12,000 lbs	Replace an existing lift with a Class I electric powered zero emission lift.	Lower of 50 percent of eligible cost or $50,000.	5 years
I	Existing diesel powered lift, including: forklift, side handler, top pick, or reach stacker.	Greater than 12,000 lbs	Replace an existing lift with a fuel cell powered zero emission lift.	Lower of 50 percent of eligible cost or $80,000.	5 years

[1]Program funded equipment cannot be used to comply with the regulatory requirement for replacing non-compliant equipment with electric or zero emission equipment associated with obtaining third and/or fourth years of "No VDECS (Verified Diesel Emission Control Systems) Available" compliance extension.
[2]Program funded equipment is not eligible to be counted towards compliance for a two year period.
[3]Additional forklifts, battery and charger, may be funded at the lower of 50 percent of eligible cost or $15,000.
[4]Additional forklifts, battery and charger, may be funded at the lower of 50 percent of eligible cost or $18,000.
[5]Additional forklifts, battery and charger, may be funded at the lower of 50 percent of eligible cost or $25,000.
[6]Additional forklifts, battery and charger, may be funded at the lower of 50 percent of eligible cost or $30,000.

13. What adjustments are recommended for cargo handling equipment projects and how do these adjustments help the State achieve its air quality goals?

- Expand where equipment operates to include distribution centers, warehouses, and agricultural processing centers. Currently the funding is limited to equipment that operates at seaports and railyards. Expanding where the equipment operates will provide additional emission reductions.

- Increase the funding to replace existing yard trucks with zero emission vehicles. An increase in funding will provide a greater incentive for equipment owners to upgrade equipment beyond the regulatory requirements and to incentivize the introduction of equipment on a broader basis.

- Add a new project option for conversion of a diesel powered yard truck with a zero emission engine. Currently, technology to convert diesel yard trucks to zero emission trucks is in early commercialization. By offering a new project option, staff expects to create customer demand for the technology and spur manufacturers to make them available sooner.

- Add a new project option that funds three or more replacement of zero emission yard trucks or conversion of diesel engines to zero emission, in addition to partially funding the cost of a multi-unit battery charger. To incorporate zero emission equipment successfully for use at freight facilities, the necessary infrastructure with reliable electrical infrastructure must be available. By supporting the development of a multi-unit station, the Program incentivizes the further development of the terminals' infrastructure for zero emission powered equipment.

- Add new options to replace diesel lifts (forklifts, side handlers, top picks, or reach stackers) with zero emission lifts. Offering funding for this freight-handling equipment will achieve new reductions in freight transport and will help to signal manufacturers to make these newer technologies more widely available.

C. Program Administration

1. How would the proposal improve administration of the Program?

ARB staff has worked with local agencies to develop improvements to the administrative requirements to reduce the workload and maximize the efficiency of the Program. The proposed changes will lead to less paperwork and shorter local agency review times, benefitting applicants as well as local agencies.

Streamline truck compliance status confirmation. The proposed updates would convert the requirement for ARB staff to confirm compliance status to a requirement for the local agencies to verify TRUCRS (Truck Regulation Upload Compliance and Reporting System) certification as part of the application review process.

***Extend operational timelines for contracts involving new technology*.** Some of the equipment included in this update is currently scaling up to statewide commercialization. Statewide availability will increase over the next few years. Offering longer project timelines is needed to allow sufficient time for equipment to become commercialized including certification/verification by ARB. Local agencies will be permitted to contract for equipment that is not yet certified/verified, with extended time allowed for the equipment to become operational. Typically, the Program allows up to 18 months from contract execution for the local agencies to liquidate the funds (projects operational, post-inspected, and funds paid to equipment owners). Payment will be made once certification/verification is documented. The extended liquidation period will not exceed the statutory liquidation deadline.

Simplify ranking requirements for undersubscribed truck solicitations. Allow implementing local agencies to begin the contract process without formal ranked list approval for truck projects if the solicitation is undersubscribed, i.e. the local agency has sufficient funds for all applications submitted in response to the solicitation. Allowing the local agency to start the contracting process early allows fleets that have complete applications to move forward with projects, thereby getting cleaner equipment on the road faster. Local agencies will be required to provide ARB with a list of the projects and post the list on their website as is required for ranked lists.

2. What amendments to the Guidelines were approved through an Executive Order?

Modify truck operational deadlines and project life. Executive Order G15-033 issued June 9, 2015, made revisions to the truck filter substrate and truck replacement funding options to extend the operational deadline for Year 4 projects.

Modify truck reuse requirements. Executive Order G-13-050 issued May 21, 2013, amended the Guidelines to allow the Executive Officer to approve a truck reuse pilot project or truck reuse program, consistent with the objectives of the Program, where a PM filter would not be required on the reused truck if other significant emission reductions can be achieved in California or the trucks will be used in a vocational program for the purposes of education but not operated on California roads.

Modify 2013 truck solicitation and project requirements. Executive Order G-13-089 issued October 29, 2013, amended the Guidelines to allow ARB staff to approve a streamlined application evaluation process for specific truck solicitations; expand truck project eligibility to include small truck fleets; expand the eligibility of trucks to MY engines 2006 and older; and establish a prioritization of the second solicitation with priority funding for zero emission trucks followed by eligible trucks in small fleets.

APPENDIX A

IMPLEMENTING STATUTE

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California Health and Safety Code Sections 39625-39627.5

39625. The Legislature finds and declares as follows:

(a) In November 2006, the voters approved the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, also known as Proposition 1B, that, among other things, provided one billion dollars ($1,000,000,000) to reduce emissions associated with the movement of freight along California's trade corridors.

(b) Proposition 1B requires these funds to be made available, upon appropriation by the Legislature and subject to the conditions and criteria provided by the Legislature, to the State Air Resources Board in order to reduce the emissions associated with goods movement.

(c) Proposition 1B further required these funds to be made available for emission reductions not otherwise required by law or regulation. These funds are intended to supplement existing funds used to finance strategies that reduce emissions and public health risk associated with the movement of freight commencing at the state's seaports and land ports of entry and transported through California's trade corridors.

(d) Tremendous growth in goods movement activity has created a public health crisis in communities located adjacent to ports and along trade corridors. It is the intent of the Legislature that these funds be expended in a manner that reduces the health risk associated with the movement of freight along California's trade corridors.

(e) It is the intent of the Legislature that the state board maximize the emission reduction benefits, achieve the earliest possible health risk reduction in heavily impacted communities, and provide incentives for the control of emission sources that contribute to increased health risk in the future.

(f) It is the intent of the Legislature that the state board develop partnerships between federal, state, and private entities involved in goods movement to reduce emissions.

(g) The purpose of this chapter is to establish standards and procedures for the expenditure of these funds.

39625.01. This chapter shall be known, and may be cited, as the Goods Movement Emission Reduction Program.

39625.02. (a) As used in this chapter and in Chapter 12.49 (commencing with Section 8879.20) of Division 1 of Title 2 of the Government Code, the following terms have the following meanings:

(1) "Administrative agency" means the state agency responsible for programming bond funds made available by Chapter 12.49 (commencing with Section 8879.20) of Division 1 of Title 2 of the Government Code, as specified in subdivision (c).

(2) Unless otherwise specified in this chapter, "project" includes equipment purchase, right-of-way acquisition, and project delivery costs.

(3) "Recipient agency" means the recipient of bond funds made available by Chapter 12.49 (commencing with Section 8879.20) of Division 1 of Title 2 of the Government Code that is responsible for implementation of an approved project.

(4) "Fund" shall have the meaning as defined in subdivision (c) of Section 8879.22 of the Government Code.

(b) Administrative costs, including audit and program oversight costs for the agency administering the program funded pursuant to this chapter, recoverable by bond funds shall not exceed 5 percent of the program's costs.

(c) The State Air Resources Board is the administrative agency for the goods movement emission reduction program pursuant to paragraph (2) of subdivision (c) of Section 8879.23 of the Government Code.

(d) The administrative agency shall not approve project fund allocations for a project until the recipient agency provides a project funding plan that demonstrates that the funds are expected to be reasonably available and sufficient to complete the project. The administrative agency may approve funding for usable project segments only if the benefits associated with each individual segment are sufficient to meet the objectives of the program from which the individual segment is funded.

(e) Guidelines adopted by the administrative agency pursuant to this chapter and Chapter 12.49 (commencing with Section 8879.20) of Division 1 of Title 2 of the Government Code are intended to provide internal guidance for the agency and shall be exempt from the Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code), and shall do all of the following:

(1) Provide for audit of project expenditures and outcomes.

(2) Require that the useful life of the project be identified as part of the project nomination process.

(3) Require that project nominations have project delivery milestones, including, but not limited to, start and completion dates for environmental clearance, land acquisition, design, construction bid award, construction completion, and project closeout, as applicable.

(f) (1) As a condition for allocation of funds to a specific project under Chapter 12.49 (commencing with Section 8879.20) of Division 1 of Title 2 of the Government Code, the administrative agency shall require the recipient agency to report, on a semiannual basis, on the activities and progress made toward implementation of the project. The administrative agency shall forward the report to the Department of Finance by means approved by the Department of Finance. The purpose of the report is to ensure that the project is being executed in a timely fashion, and is within the scope and budget identified when the decision was made to fund the project. If it is anticipated that project costs will exceed the approved project budget, the recipient agency shall provide a plan to the administrative agency for achieving the benefits of the project by either downscoping the project to remain within budget or by identifying an alternative funding source to meet the cost increase. The administrative agency may either approve the corrective plan or direct the recipient agency to modify its plan.

(2) Within six months of the project becoming operable, the recipient agency shall provide a report to the administrative agency on the final costs of the project as compared to the approved project budget, the project duration as compared to the original project schedule as of the date of allocation, and performance outcomes derived from the project compared to those described in the original application for funding. The administrative agency shall forward the report to the Department of Finance by means approved by the Department of Finance.

39625.1. As used in this chapter, the following terms have the following meanings:
(a) "Applicant" means any local public entity involved in the movement of freight through trade corridors of the state or involved in air quality improvements associated with goods movement. For the purposes of administering a loan or loan guarantee program only, an applicant may include any state agency.
(b) "Emission" or "emissions" means emissions including, but not limited to, diesel particulate matter, oxides of nitrogen, oxides of sulfur, and reactive organic gases.
(c) "Emission sources" means one of the following categories of sources of air pollution associated with the movement of freight through California's trade corridors: heavy-duty trucks, locomotives, commercial harbor craft, ocean-going vessels related to freight, and cargo-handling equipment.
(d) "Goods movement facility" means airports, seaports, land ports of entry, freight distribution warehouses and logistic centers, freight rail systems, and highways that have a high volume of truck traffic related to the movement of goods, as determined by the state board.
(e) "Trade corridors" means any of the following areas: the Los Angeles/Inland Empire region, the Central Valley region, the Bay Area region, and the San Diego/border region.

39625.3. Funding pursuant to this chapter may include grants, loans, and loan guarantees.

39625.5. (a) (1) Upon appropriation by the Legislature from the funds made available by paragraph (2) of subdivision (c) of Section 8879.23 of the Government Code, the state board shall allocate funds on a competitive basis for projects that are shown to achieve the greatest emission reductions from each emission source identified in subdivision (c) of Section 39625.1, not otherwise required by law or regulation, from activities related to the movement of freight along California's trade corridors, commencing at the state's airports, seaports, and land ports of entry.
(2) Projects eligible for funding pursuant to paragraph (1) shall include, but are not limited to, the following:
(A) The replacement, repower, or retrofit of heavy-duty diesel trucks.
(B) The replacement, repower, or retrofit of diesel locomotive engines, with priority given to switching locomotive engines, provided that before any project is authorized for a locomotive engine operated and controlled by a railroad company that has entered into a memorandum of understanding or any other agreement with a state or federal agency, a local air quality management district, or a local air pollution control district, including, but not limited to, the ARB/Railroad Statewide Agreement Particulate Emissions Reductions Program at California Rail Yards, dated June 2005, the state board shall determine that the emission reductions that would be achieved by the locomotive engine are not necessary to satisfy any mandated emission reduction requirement under any such agreement.
(C) The replacement, repower, or retrofit of harbor craft that operates at the state's seaports.
(D) The provision of on-shore electrical power for ocean freight carriers calling at the state's seaports to reduce the use of auxiliary and main engine ship power.

(E) Mobile or portable shoreside distributed power generation projects that eliminate the need to use the electricity grid.

(F) The replacement, repower, or retrofit of cargo handling equipment that operates at the state's seaports and rail yards.

(G) Electrification infrastructure to reduce engine idling and use of internal combustion auxiliary power systems at truck stops, intermodal facilities, distribution centers, and other places where trucks congregate.

(b) (1) The state board shall allocate funds in a manner that gives priority to emission reduction projects that achieve the earliest possible reduction of health risk in communities with the highest health risks from goods movement facilities.

(2) In evaluating which projects to fund, the state board shall at a minimum consider all of the following criteria:

(A) The magnitude of the emission reduction.

(B) The public health benefits of the emission reduction.

(C) The cost-effectiveness and sustainability of the emissions reductions.

(D) The severity and magnitude of the emission source's contributions to emissions.

(E) Regulatory and State Implementation Plan requirements, and the degree of surplus emissions to be reduced.

(F) The reduction in greenhouse gases, consistent with and supportive of emission reduction goals, consistent with existing law.

(G) The extent to which advanced emission reduction technologies are to be used.

(H) The degree to which funds are leveraged from other sources.

(I) The degree to which the project reduces air pollutants or air contaminants in furtherance of achieving state and federal ambient air quality standards and reducing toxic air contaminants.

(J) The total emission reductions a project would achieve over its lifetime per state dollar invested.

(K) Whether an emissions reduction is likely to occur in a location where emissions sources in the area expose individuals and population groups to elevated emissions that result in adverse health effects and contribute to cumulative human exposures to pollution.

(c) The state board shall ensure that state bond funds are supplemented and matched with funds from federal, local, and private sources to the maximum extent feasible.

39626. (a) (1) The state board shall develop guidelines by December 31, 2007, consistent with the requirements of this chapter, to implement Section 39625.5, in consultation with stakeholders, including, but not limited to, local air quality management and air pollution control districts, metropolitan planning organizations, port authorities, shipping lines, railroad companies, trucking companies, harbor craft owners, freight distributers, terminal operators, local port community advisory groups, community interest groups, and airports. The guidelines shall, at a minimum, include all of the following:

(A) An application process for the funds, and any limits on administrative costs for the recipient agency, including an administrative cost limit of up to 5 percent.

(B) A requirement for a contribution of a specified percentage of funds leveraged from other sources or in-kind contributions toward the project.

(C) Project selection criteria.
(D) The method by which the state board will consider the air basin's status in maintaining and achieving state and federal ambient air quality standards and the public health risk associated with goods movement-related emissions and toxic air contaminants.
(E) Accountability and auditing requirements to ensure that expenditure of bond proceeds, less administrative costs, meets quantifiable emission reduction objectives in a timely manner, and to ensure that the emission reductions will continue in California for the project lifetime.
(F) Requirements for agreements between applicants and recipients of funds executed by the state board related to the identification of project implementation milestones and project completion that ensure that if a recipient fails to accomplish project milestones within a specified time period, the state board may modify or terminate the agreement and seek other remedies as it deems necessary.
(2) Prior to the adoption of the guidelines, the state board shall hold no less than one public workshop in northern California, one public workshop in the Central Valley, and one public workshop in southern California.
(b) For each fiscal year in which funds are appropriated for the purposes of this chapter, the state board shall issue a notice of funding availability no later than November 30. For the 2007-08 fiscal year, if funds are appropriated for the purposes of this chapter, the state board shall issue a notice of funding upon adoption of the guidelines described in subdivision (a).
(c) (1) After applications have been submitted and reviewed for consistency with the requirements of this chapter and the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, the state board shall compile and release to the public a preliminary list of all projects that the state board is considering for funding and provide adequate opportunity for public input and comment.
(2) The state board shall hold no less than one public workshop in northern California, one public workshop in the Central Valley, and one public workshop in southern California to discuss the preliminary list. This requirement shall not apply to the funds appropriated in the 2007-08 fiscal year.
(3) After the requirements of paragraphs (1) and (2) are met, the state board shall adopt a final list of projects that will receive funding at a regularly scheduled public hearing.
(d) Nothing in this chapter authorizes the state board to program funds not appropriated by the Legislature.

39626.5. (a) A project shall not be funded pursuant to this chapter unless both of the following requirements are met:
(1) The project is sponsored by an applicant.
(2) The project is consistent with any comprehensive local or regional plans or strategies to reduce emissions from goods movement activities in its jurisdiction.
(b) Notwithstanding Section 16304.1 of the Government Code, an applicant receiving funds pursuant to this chapter shall have up to two years from the date that the funds are allocated to the applicant pursuant to a grant agreement to award the contract for implementation of a project, or the funds shall revert to the California Ports

Infrastructure, Security, and Air Quality Improvement Account for allocation as provided in paragraph (2) of subdivision (c) of Section 8879.23 of the Government Code upon appropriation by the Legislature. Funds not liquidated within four years of the date of the award of the contract between the applicant and the contractor shall revert to the California Ports Infrastructure, Security, and Air Quality Improvement Account for allocation as provided in paragraph (2) of subdivision (c) of Section 8879.23 of the Government Code upon appropriation by the Legislature. Returned funds or unspent funds from obligated contracts received by the applicant prior to the end of the four-year liquidation period may be awarded by the applicant to fund other equipment projects included on the same competitively ranked list approved by the state board pursuant to the grant agreement, or, if there are no other eligible projects included on that list, shall be returned to the state board for reallocation to an applicant by the state board pursuant to guidelines developed and adopted by the state board through a public process. These guidelines shall give first priority to projects that are both in the same emission source category and in the same trade corridor as the original project, and second priority to projects that are only in the same trade corridor as the original project. All funds awarded by the applicant shall be liquidated within four years of the date of the award of the original contract or shall revert to the California Ports Infrastructure, Security, and Air Quality Improvement Account for allocation provided in paragraph (2) of subdivision (c) of Section 8879.23 of the Government Code upon appropriation by the Legislature.

(c) Of the amount appropriated in Item 3900-001-6054 of the Budget Act of 2007, not more than twenty-five million dollars ($25,000,000) shall be available to the state board for the purpose of executing grant agreements directly with ports, railroads, or local air districts for eligible projects to achieve the earliest possible health risk reduction from the emission sources identified in subdivision (c) of Section 39625.1. It is the intent of the Legislature that funds allocated pursuant to this subdivision be distributed pursuant to the guidelines adopted by the state board under Section 39626, and that the state board provide sufficient opportunity for the public to review and comment on any projects proposed to be funded pursuant to this subdivision.

39627. The state board may seek reimbursement for program administration costs annually through an appropriation in the Budget Act from funds available pursuant to paragraph (2) of subdivision (c) of Section 8879.23 of the Government Code.

39627.5. The state board shall submit an annual report to the Legislature summarizing its activities related to the administration of this chapter with the Governor's proposed budget, on January 10, for the ensuing fiscal year. The summary shall, at a minimum, include a description of projects funded pursuant to this chapter, the amount of funds allocated for each project, the location of each project, the status of each project, and a quantitative description of the emissions reductions achieved through the project or program. The state board shall include in this report a description of any changes to the scope of grant agreements entered into to allocate funds to an applicant or changes to the award amounts described in a grant agreement.

APPENDIX B

DECEMBER 2014 STATUS REPORT

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Proposition 1B: Goods Movement Emission Reduction Program
DECEMBER 2014 SEMI-ANNUAL STATUS REPORT

This status report provides an update on implementation of 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 through incentives. Consistent with State law, the Program Guidelines for Implementation (Guidelines) and related documents detail the grant/contract requirements for the Air Resources Board (ARB or Board), participating local agencies, and equipment owners (see Program website at: http://www.arb.ca.gov/gmbond).

ARB adopts the Guidelines, and then solicits, awards, funds, and oversees grants to local agencies like air districts and seaports. The local agencies offer grants or contracts in a competitive process to diesel equipment owners to co-fund the upgrade of diesel equipment to cleaner technologies, ahead of or beyond any regulatory requirements to do so. To ensure accountability and effective use of these public funds, the local agencies: solicit for eligible projects, review applications, inspect the old equipment, provide data to competitively rank each piece of equipment based on emission reductions and cost-effectiveness, sign grants or contracts with equipment owners, inspect the upgraded equipment, make payment for the cleaner technology, and track/report on funded projects.

The information in this report is based on the local agencies' semi-annual reports as of September 30, 2014, and supplemented with information in the Program's Goods Movement Online Database. The information is reported by year of funding, as defined below.

- Year 1: Awarded May 2008 Board Hearing
- Year 2: Awarded June 2010 and December 2011 Board Hearings
- Year 3: Awarded December 2011 Board Hearing - drayage truck projects only
- Year 4: Awarded July 2013 Board Hearing

Available Funding and Expenditures

Each budget appropriation authorizes ARB to use a specific amount of funding for this Program, within statutory timeframes. However, the appropriation does not provide any cash for this purpose. Therefore, we depend on the receipt of proceeds from State bond sales or other mechanisms to fund new projects.

The entire $1 billion has been appropriated in State budgets (over multiple years), with $980 million to ARB for this Program and $20 million set aside by the control agencies to cover bond issuance and oversight costs. The final appropriation of $240 million was approved in the Fiscal Year (FY) 2014-15 budget. In 2015, ARB will update the Guidelines, release a Notice of Funding Availability, and award the funds. The local agencies are expected to hold solicitations in Spring/Summer 2015 timeframe.

ARB has allocated approximately $740 million for local agency projects and ARB's administration costs over multiple years, and has paid about $719 million through September 2014.

Project Results and Benefits

The Program bond monies are leveraging substantial match funding from private, local, and federal sources – more than one match dollar for every Program dollar invested.

Trucks. The local agencies have completed the truck projects from Year 1 through Year 3 with more than 9,500 cleaner trucks operating in the four priority trade corridors. The local agencies are in the process of implementing the Year 4 projects and expect about 4,000 trucks to be upgraded with cleaner equipment, with over 700 projects being operational through September 2014.

Ships at Berth. The Bay Area District's early grant project to install grid-based electrical power for three berths at the Port of Oakland was completed in 2011. Under Year 2 grant projects, the installation of electrical power was completed in 2013 for nine berths at the Port of Oakland and 25 berths at the Ports of Long Beach, Los Angeles, and Hueneme. Ships began to plug into the grid in early 2014.

Locomotives and Commercial Harbor Craft. The Sacramento and South Coast Districts completed the upgrade of 19 locomotives operating in the Central Valley and the Los Angeles/Inland Empire trade corridors. Another six locomotives operating in the latter trade corridor are expected to be upgraded by the end of 2014. In addition, the San Diego District's harbor craft project was completed and operational in 2013, and they are in the process of signing contracts to upgrade two more.

Benefits. When fully implemented, we expect projects included in this report will reduce over 4.4 million pounds or 2,200 tons of particulate matter (PM 2.5), plus over 170 million pounds or 85,000 tons of nitrogen oxides (NOx). Emission reductions for projects funded through 2013 are over the life of their grant term (e.g., 2 to 5 years for trucks and 10 years for ships at berth). Emission reductions for the Year 4 grants take into consideration ARB's regulations and include only the portion of the emission reductions that are early or extra to these regulations.

Implementation of Funds

Year 4. On July 25, 2013, the Board awarded approximately $150 million, of which $143 million was allocated for truck projects throughout the State, including $5.3 million for loan assistance. In addition, $6 million was allocated towards a truck filter substrate replacement program and nearly $1 million for harbor craft projects. ARB anticipated reallocating the $5.3 million loan assistance funds due to initial project demand; however, due to project fallout the funds are not needed. ARB will reallocate these funds in 2015, consistent with the priorities and procedures in the Guidelines. ARB anticipates the truck filter substrate replacement program to begin in early 2015.

Additionally, Year 4 funds include monies not utilized from the Year 2 grants due to project fallout. Local agencies requested that these funds be made available to fund

projects from the 2013 Truck Solicitations and ARB approved these requests consistent with the priorities and procedures in the Guidelines.

Local agencies held solicitations for truck projects beginning August 2013 through early October 2013 and a subsequent backup truck solicitation prioritizing small truck fleets between early October 2013 and early December 2013 (2013 Truck Solicitations). The local agencies received applications for over 5,000 projects in excess of $200 million with half of the applications submitted by small truck fleets. Due to project fallout, they anticipate approximately 4,000 trucks to be upgraded. Over 700 trucks are operational with the majority of trucks expected to be operational by the end of 2014. The remaining trucks will be upgraded by early to mid-2015.

Year 2 and Year 3. ARB received funds for these projects in 2010 and 2011 from multiple bond sales. In June 2010, the Board awarded $200 million in available cash primarily for the categories of truck projects and ships at berth/cargo handling equipment projects, with smaller grants for locomotive and harbor craft projects.

In December 2011, the Board awarded approximately $101 million from the Fall 2011 bond sale and also allocated potential proceeds from a Spring 2012 bond sale; all of these funds were allocated for truck projects including a set aside of $66.6 million for drayage trucks (Year 3 projects). Funds not utilized for drayage trucks were reallocated for Year 2 truck projects in accordance with the December 2011 Board approval. ARB received approximately $15 million from the Spring bond sale and also reallocated $6 million in ARB administration funds to complete the Year 2 truck projects.

All projects are complete except for the locomotive projects which are expected to be operational by the end of 2014.

Year 1. The first year funds of approximately $246 million were used for projects to upgrade trucks, locomotives, and ships at berth. All of these projects were suspended for 6 to 14 months due to the December 2008 “stop work” order on bond funded programs, which resulted in an extended delay from time of application to contract. This led to some funds being unused by the local agencies; grant agreements were amended to transfer funds from undersubscribed grants to oversubscribed grants. All projects are complete.

Project Status

The tables on the following pages present the information by trade corridor (Table 1), source category (Table 2), and by grant agreement (Tables 3 through 8).

TABLE 1 PROJECTS BY TRADE CORRIDOR

Trade Corridor (Local Agency)		Award	PM 2.5 (lbs)	NOx (lbs)	Operational Projects	Projects in Process
Los Angeles/Inland Empire	South Coast Air Quality Management District	$385,631,095	2,169,000	98,859,000	3,192 other trucks 1,601 drayage trucks 25 ships at berth 4 locomotives	1,905 other trucks 6 locomotives
	Port of Long Beach	$3,550,000	57,000	609,000	67 drayage trucks	NA
Central Valley	San Joaquin Valley Air Pollution Control District	$144,916,231	1,210,000	39,223,000	2,218 other trucks	723 other trucks
	Sacramento Metropolitan Air Quality Management District	$31,508,368	370,000	6,765,000	393 other trucks 15 locomotives	82 other trucks
Bay Area	Bay Area Air Quality Management District	$90,446,624	472,000	19,073,000	647 other trucks 1,449 drayage trucks 12 ships at berth	320 other trucks
San Diego/Border	San Diego Air Pollution Control District	$28,127,061	122,000	3,532,000	378 other trucks 98 drayage trucks 1 harbor craft	134 other trucks 2 harbor craft
	Imperial County Air Pollution Control District	$17,114,391	87,000	3,093,000	251 other trucks	121 other trucks
Statewide - Loan Assistance[1]		$10,300,000				
Statewide - Truck Filter Substrate Replacement Program		$6,300,000				
ARB Administration		$21,400,000				
TOTAL		**$739.3 million**	**4,487,000 lbs or 2,244 tons**	**171,154,000 lbs or 85,577 tons**	7,079 other trucks 3,215 drayage trucks 37 ships at berth 1 harbor craft 19 locomotives	3,285 other trucks 2 harbor craft 6 locomotives

[1]The $5.3 million awarded at the July 2013 Board Meeting is not needed due to project fallout; ARB will reallocate the funds in 2015.

TABLE 2 PROJECTS BY SOURCE CATEGORY

Funding Category	Award	PM 2.5 (lbs)	NOx (lbs)	Operational Projects	Projects in Process
Other Trucks	$485,029,178	2,831,000	118,794,000	7,079	3,285
Drayage Trucks	$114,928,891	871,000	18,695,000	3,215	NA
Ships at Berth	$82,395,415	459,000	29,283,000	37	NA
Harbor Craft	$915,286	3,000	43,000	1	2
Locomotives	$18,025,000	323,000	4,339,000	19	6
ARB Loan Assistance[1]	$10,300,000				
ARB Truck Filter Substrate Replacement Program	$6,300,000				
ARB Administration	$21,400,000				
TOTAL	**$739.3 million**	**4,487,000 lbs or 2,244 tons**	**171,154,000 lbs or 85,577 tons**	7,079 trucks 3,215 drayage trucks 37 ships at berth 1 harbor craft 19 locomotives	3,285 trucks 2 harbor craft 6 locomotives

[1]The $5.3 million awarded at the July 2013 Board Meeting is not needed due to project fallout; ARB will reallocate the funds in 2015.

TABLE 3 LOS ANGELES/INLAND EMPIRE TRADE CORRIDOR – South Coast AQMD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 4					
Other Trucks	Replace old dirty trucks with newer clean models. 13GML01/G11GMLT1	$96,275,784	151,000	33,588,000	District has signed contracts to upgrade 2,079 trucks. 307 trucks have been scrapped and replaced with much cleaner trucks.
Year 3					
Priority Drayage Trucks	Replace old dirty trucks with newer clean models serving ports and railyards. G11GMLP1	$3,302,250	1,000	973,000	Grant complete. 105 old trucks have been scrapped and replaced with much cleaner trucks.
Year 2					
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G11GMLT1/G08GMLT1	$90,363,736	478,000	14,171,000	Grant complete. 1,513 trucks have been scrapped and replaced with much cleaner trucks. 385 trucks have been retrofitted with soot filters.
Ships at Berth	Eliminate or reduce emissions from ships at berth. G08GMLS1	$59,973,125	343,000	21,841,000	District is in the process of completing the grant. Construction and installation of shore power equipment for 25 berths (12 for Port of Long Beach, 10 for Port of Los Angeles, 3 for Port of Hueneme) is complete with ships plugging into the grid starting in January 2014.
Locomotives	Replace old dirty locomotives with newer clean models. G08GMLL1	$4,635,000	27,000	315,000	District has signed a contract to upgrade 6 locomotives and expects the projects to be operational by December 2014.

TABLE 3 (continued) LOS ANGELES/INLAND EMPIRE TRADE CORRIDOR – South Coast AQMD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 1					
Drayage Trucks	Replace old dirty trucks serving the Ports of Los Angeles and Long Beach with newer clean models. G07GMLP1	$6,930,000	66,000	1,104,000	Grant complete. 132 old trucks have been scrapped and replaced with much cleaner trucks.
	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models serving the rail yards. G07GMLP2	$2,625,000	31,000	577,000	Grant complete. 50 old trucks have been scrapped and replaced with much cleaner trucks. 2 trucks have been retrofitted with soot filters.
	Replace old dirty trucks serving the Ports of Los Angeles and Long Beach with newer clean models. G07GMLP3-03	$68,539,800	511,000	10,177,000	Grant complete. 1,312 old trucks have been scrapped and replaced with much cleaner trucks.
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMLT1	$6,877,500	96,000	1,638,000	Grant complete. 131 old trucks have been scrapped and replaced with much cleaner trucks.
	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMLT2	$43,018,900	440,000	13,295,000	Grant complete. 823 old trucks have been scrapped and replaced with much cleaner trucks. 33 trucks have been retrofitted with soot filters.
Locomotives	Replace old dirty locomotives at rail yards with newer clean models. G07GMLL1	$3,090,000	25,000	1,180,000	Grant complete. 4 locomotives have been repowered with much cleaner engines.

TABLE 3 (continued) LOS ANGELES/INLAND EMPIRE TRADE CORRIDOR – Port of Long Beach

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 1					
Drayage Trucks	Replace old dirty trucks serving the Ports of Los Angeles and Long Beach with newer clean models. G07GMLP3	$3,550,000	57,000	609,000	Grant complete. 67 old trucks have been scrapped and replaced with much cleaner trucks.
Corridor Total		$389,181,095	2,226,000	99,468,000	

TABLE 4 CENTRAL VALLEY TRADE CORRIDOR – San Joaquín Valley APCD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 4					
Other Trucks	Replace old dirty trucks with newer clean models. 13GMC01/G11GMCT1	$39,519,385	51,000	9,183,000	District has signed contracts to upgrade 515 trucks. 151 trucks have been scrapped and replaced with much cleaner trucks.
Year 2					
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G11GMCT1/G08GMCT1	$59,689,926	495,000	14,357,000	Grant complete. 1,058 old trucks have been scrapped and replaced with much cleaner trucks. 105 trucks have been retrofitted with soot filters.
Year 1					
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMCT1	$4,882,500	104,000	1,364,000	Grant complete. 93 old trucks have been scrapped and replaced with much cleaner trucks. 10 trucks have been retrofitted with soot filters.
	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMCT3	$40,824,420	560,000	14,319,000	Grant complete. 789 old trucks have been scrapped and replaced with much cleaner trucks. 12 trucks have been retrofitted with soot filters.

TABLE 4 (continued) CENTRAL VALLEY TRADE CORRIDOR – Sacramento Metropolitan AQMD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 4					
Other Trucks	Replace old dirty trucks with newer clean models. 13GMC02/G11GMCT2	$8,054,846	15,000	1,310,000	District has signed contracts to upgrade 159 trucks. 102 trucks have been scrapped and replaced with much cleaner trucks.
Year 2					
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G11GMCT2/G08GMCT2	$8,409,901	43,000	1,568,000	Grant complete. 178 old trucks have been scrapped and replaced with much cleaner trucks. 15 trucks have been retrofitted with soot filters.
Year 1					
Other Trucks	Replace old dirty trucks with newer clean models. G07GMCT2	$102,847	1,000	27,000	Grant complete. 2 old trucks have been scrapped and replaced with much cleaner trucks.
	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMCT4	$4,640,774	40,000	1,016,000	Grant complete. 96 old trucks have been scrapped and replaced with much cleaner trucks.
Locomotives	Replace old dirty long-haul locomotives with new clean models. G07GMCL1	$10,300,000	271,000	2,844,000	Grant complete. 15 locomotives have been repowered with much cleaner engines and are expected to routinely travel between the Central Valley and the Los Angeles/Inland Empire trade corridors.
Corridor Total		$176,424,599	1,580,000	45,988,000	

TABLE 5 BAY AREA CORRIDOR – Bay Area AQMD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 4					
Other Trucks	Replace old dirty trucks with newer clean models. 13GMB01/G11GMBT1	$14,545,593	16,000	2,506,000	District has signed contracts to upgrade 213 trucks. 60 trucks have been scrapped and replaced with much cleaner trucks.
Year 3					
Priority Drayage Trucks	Replace old dirty trucks with newer clean models serving ports and railyards. G11GMBP1	$10,311,000	1,000	2,678,000	Grant complete. 357 old trucks have been scrapped and replaced with much cleaner trucks.
Year 2					
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G11GMBT1/G08GMBT1	$18,178,650	84,000	2,580,000	Grant complete. 348 old trucks have been scrapped and replaced with much cleaner trucks. 28 trucks have been retrofitted with soot filters.
Ships at Berth	Eliminate or reduce emissions from ships at berth and/or cargo equipment at ports and intermodal railyards. G08GMBS1	$20,000,000	98,000	6,278,000	District is in the process of completing the grant. Construction and installation of shore power equipment for 9 berths at the Port of Oakland is complete with ships plugging into the grid starting in January 2014.

TABLE 5 (continued) BAY AREA CORRIDOR – Bay Area AQMD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 1					
Drayage Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMBP1	$14,526,891	175,000	1,897,000	Grant complete. 203 old trucks have been scrapped and replaced with much cleaner trucks. 889 trucks have been retrofitted with soot filters.
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMBT1	$10,462,200	80,000	1,970,000	Grant complete. 198 old trucks have been scrapped and replaced with much cleaner trucks. 13 trucks have been retrofitted with soot filters.
Ships at Berth	Install grid-based shoreside electrical power at 3 berths at the Port of Oakland so ships can plug in and turn off their engines while docked. G07GMBS1	$2,422,290	18,000	1,164,000	Grant complete. Shore power has been installed at 3 ship berths.
Locomotives	Replace old dirty locomotives at rail yards with newer clean models. G07GMBL1	$0	0	0	Grant terminated and funds transferred to the existing drayage truck grant G07GMBP1, at the District's request.
Corridor Total		$90,446,624	472,000	19,073,000	

TABLE 6 SAN DIEGO/BORDER TRADE CORRIDOR – San Diego APCD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 4					
Other Trucks	Replace old dirty trucks with newer clean models. 13GMS01	$9,011,061	9,000	647,000	District has signed contracts to upgrade 149 trucks. 54 trucks have been scrapped and replaced with much cleaner trucks.
Commercial Harbor Craft	Replace old dirty engines in harbor craft with newer clean engines. 13GMS01	$800,000	2,000	32,000	District is in the process of signing contracts with equipment owners to upgrade 2 harbor craft vessels.
Year 2					
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G11GMST1/G08GMST2	$11,376,764	69,000	1,830,000	Grant complete. 222 old trucks have been scrapped and replaced with much cleaner trucks. 70 trucks have been retrofitted with soot filters.
Commercial Harbor Craft	Replace old dirty engines in harbor craft with newer clean engines. G08GMSH1	$115,286	1,000	11,000	Grant complete. 1 harbor craft vessel has been upgraded.

TABLE 6 (continued) SAN DIEGO/BORDER TRADE CORRIDOR – San Diego APCD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 1					
Drayage Trucks	Retrofit or replace trucks serving the Port of San Diego. G07GMSP1	$0	0	0	Grant terminated and funds transferred to the drayage truck grant G07GMSP2, at the District's request.
	Replace old dirty trucks serving the Port of San Diego with newer clean models. G07GMSP2	$5,143,950	29,000	680,000	Grant complete. 98 old trucks have been scrapped and replaced with much cleaner trucks.
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMST2	$1,680,000	12,000	332,000	Grant complete. 32 old trucks have been scrapped and replaced with much cleaner trucks.

TABLE 6 (continued) SAN DIEGO/BORDER TRADE CORRIDOR – Imperial County APCD

Funding Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 4					
Other Trucks	Replace old dirty trucks with newer clean models. 13GMS02/G11GMST2	$6,611,061	6,000	1,099,000	District has signed contracts to upgrade 61 trucks. 29 trucks have been scrapped and replaced with much cleaner trucks.
Year 2					
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G11GMST2/G08GMST1	$7,929,531	60,000	1,561,000	Grant complete. 147 old trucks have been scrapped and replaced with much cleaner trucks. 24 trucks have been retrofitted with soot filters.
Year 1					
Other Trucks	Retrofit trucks with soot filters and replace old dirty trucks with newer clean models. G07GMST3	$2,573,799	21,000	433,000	Grant complete. 51 old trucks have been scrapped and replaced with much cleaner trucks.

TABLE 6 (continued) SAN DIEGO/BORDER TRADE CORRIDOR – Port of San Diego

Fiscal Year/ Category	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 1					
Ships at Berth	Install grid-based shore power at the Port of San Diego. G07GMSS1	$0	0	0	Grant terminated and funds transferred to the San Diego District's drayage truck grant G07GMSP2, at the Port's request.
Corridor Total		$45,241,452	209,000	6,625,000	

TABLE 7 STATE AGENCY – LOAN ASSISTANCE – Trucks Only

State Agency	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 4					
ARB	Loan assistance to replace old dirty trucks with newer clean models.	$5,300,000	TBD	TBD	ARB anticipated reallocating the funds to grants due to the initial demand from the 2013 Truck Solicitations. However, these funds will not be needed due to project fallout. ARB intends to reallocate these funds in 2015, as per statute and Guidelines.
Year 3					
ARB	Loan assistance to replace old dirty trucks with newer clean models serving ports and railyards.	$5,000,000	Included in the Bay Area and South Coast Districts' FY2011-12 Priority Drayage Reserve Grants.		Loan assistance to help replace drayage trucks funded under the priority drayage reserve through the South Coast and Bay Area Districts. Loan assistance is improved access to financing through the California Capital Access Program with funds used for a loan loss reserve account if a truck owner defaults on their loan. 136 trucks projects have utilized the loan assistance program.

TABLE 8 MULTI-CORRIDOR TRUCK PROGRAMS

State Agency	Project Description	Grant Amount	Emission Reductions (pounds)		Current Project Status
			PM 2.5	NOx	
Year 4					
ARB	Truck filter substrate replacement	$6,300,000	TBD	TBD	ARB will finalize the requirements to implement the program and will be working with a local agency to administer the program in 2015.