

Proposition 1B Goods Movement Emission Reduction Program Pre-Application Community Meeting July 24th, 2015



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Meeting Purpose

- ▶ To solicit public input on the funding categories to be addressed in the District's application to the California Air Resources Board for Proposition 1B Goods Movement Emission Reduction Program funding.
- ▶ Funding is not yet available for equipment owners
- ▶ Program guidelines for the FY2015-2016 (Year 5) round of funding, including eligibility requirements, have been approved and adopted by the CARB's Board.
- ▶ This workshop is intended to provide an overview of the funding categories of the Proposition 1B and unlike the Regulation itself, this meeting and associated materials do not have the force of law.



Program Authority

- ▶ Proposition 1B in 2006
 - \$1 billion to reduce freight emissions
 - All projects funded involved movement of goods

- ▶ Implementing legislation
 - Senate Bill 88 and Assembly Bill 201
 - Reductions not required by law or regulation
 - \$718 million has been awarded to date
 - \$240 million remaining

Projects funded to date in San Diego

- ▶ \$22.1 million spent to date
- ▶ Over 60 tons of PM and 1,700 tons of NOx
- ▶ 70 Retrofits
- ▶ 454 Replacements
- ▶ 3 Commercial Harbor Craft Repower



Total Funding Targets for each Trade Corridor

	Funding Target
San Diego/Imperial Valley*	\$60 million
Los Angeles/Inland Empire	\$550 million
Central Valley	\$250 million
Bay Area	\$140 million

~ \$15 million
remaining for San Diego/Imperial Valley
Trade Corridor *

* San Diego APCD will be accepting applications for Imperial County APCD this year. Imperial County APCD is not accepting applications.

Priorities for Remaining Funds

To help meet air quality and climate goals:

- ▶ Zero emission and near-zero emission technologies
- ▶ Small truck fleets
- ▶ Tier 4 locomotive projects



Projects Available for Funding FY2015-16 (Year 5)

Trucks

Diesel Replacement (Small Fleets only)
Advanced Technology Replacement (All Fleets)
Truck Electrification Infrastructure
Three-Way Truck Transaction
Repower (Small Fleets Only)

NEW

TRUs

Replacement Electric/Infrastructure
Replacement Cryogenic/Infrastructure

Locomotives

Switcher
Medium Horsepower Locomotive
Line Haul
Emissions Capture and Control System

Projects Available for Funding FY2015-16 (Year 5)

Commercial Harbor Craft

Repower/Replace
Tugs/Tows
Crew and Supply
Other Vessels
Hybrid Power Systems

Cargo Handling Equipment

Yard Truck Conversion (to electric)
Yard Truck Replacement/Infrastructure
Forklift/Lift Replacement

Ships at Berth

Various Opportunities

**Projects Available for Funding
FY2015-16 (Year 5)**

**Heavy-Duty Diesel
Trucks**

**Diesel Replacement (Small Fleets Only)
Advanced Technology Replacement (All Fleets)
Truck Electrification Infrastructure
Three-Way Truck Transaction
Repower (Small Fleets Only)**

HDD Truck Category Changes



- ▶ Large fleets must purchase zero or near-zero technology and be fully in compliance
- ▶ Infrastructure for electric and hydrogen fueling stations now eligible
- ▶ Ability to combine AB118 (HVIP) or CEC funding with Prop 1B



- ▶ 2nd and 3rd truck of compliant small fleets still eligible for diesel replacements
- ▶ Funding is not available for retrofit projects
- ▶ Only engines meeting the 2010 emission standard (0.20 g/bhp-hr of NOx) are eligible
- ▶ Class 6, 7, and 8 trucks are now eligible for funding

HDD Truck Eligibility Requirements

- Fleet compliance with the Statewide Truck and Bus Rule
- Must be registered and compliant in TRUCRS database
- Manufacturer's Gross Vehicle Weight Rating (GVWR) equal to or greater than 19,501 lbs (Class 6)
- At least 75% operation within CA for the past 2 years (24 months)
- Continuous registration in CA for the past 24 months



HDD Truck Funding Available

Project Type	Truck Class	Old Engine Model Year	New Engine Model Year 2015 or Newer	Maximum Funding Amounts
Replacement with a MY2015 or newer engine (All Fleets)	Class 8 (33,001 lbs+) or Class 7 (26,001 - 33,000 lbs)	2009 and older	Zero emission truck*	\$200,000
			Hybrid capable of zero emission*	\$150,000
			Low NOx (0.02 g/bhp-hr or less NOx)	\$100,000
			Hybrid replacement*	\$80,000
			Natural gas replacement	\$65,000
	Class 6 (19,501 - 26,000 lbs)	1998-2009	Zero emission truck*	\$100,000
			Hybrid capable of zero emission*	\$65,000
			Low NOx (0.02 g/bhp-hr or less NOx)	\$50,000
			Hybrid replacement*	\$45,000
			Natural gas replacement	\$40,000

* Hybrid and zero-emission trucks are eligible for funding by AQIP.

HDD Truck Funding Available

Project Type	Truck Class	Old Engine Model Year	New Engine Model Year	Maximum Funding Amounts
Replacement (Small Fleets 3 Trucks or Less)	Class 8	2009 and older	2015 or newer Class 8	\$60,000
	Class 7	2009 and older	2015 or newer Class 7	\$45,000
	Class 6	1998-2009	2015 or newer Class 6	\$25,000
	Class 8	2006 and older	2011 or newer Class 8	\$40,000
	Class 7	2006 and older	2011 or newer Class 7	\$35,000
Repower (Small Fleets Only)	Class 7 or Class 8	2009 and older	2015 or newer Class 7 or 8	\$20,000
	Class 6	1998-2009	2015 or newer Class 6	\$10,000

HDD Truck Funding Available

Project Type	Truck Class	Old Engine Model Year	New Engine Model Year 2015 or Newer	Maximum Funding Amounts
Three-way Truck Transaction for All Fleets	Class 6/7/8	Truck 1: 2007-2009 Truck 2: 2006 or older	<ul style="list-style-type: none"> Replace Truck #1 (MY2007-2009 with OEM filter Level 3 retrofit) with Truck #2 with an advanced technology truck Scrap Truck #3 (<2006) and replace with Truck #1 	\$45,000 to \$200,000
Three-way Truck Transaction for Small Fleets Only	Class 6/7/8	Truck 1: 2007-2009 Truck 2: 2006 or older	<ul style="list-style-type: none"> Replace Truck #1 (MY2007-2009 with OEM filter or Level 3 retrofit) with Truck #2 with an diesel or alternative fuels truck Scrap Truck #3 (<2006) and replace with Truck #1 	\$25,000 to \$60,000
Truck Stop Electrification	Landside truck electrification infrastructure			Up to 50%*
Electric Charging Station or Hydrogen Fueling	Option only available if owner replaces a minimum of 3 heavy duty trucks. Funding is in addition to the funding for the replacement trucks.			Lower of up to 50% or \$90,000

* Funded at the lower of 50% eligible project costs or a level commensurate with a cost effectiveness of 0.10 lbs of weighted emissions reduced per State dollar invested.

HDD Trucks – Project Options

Truck Replacement (All Fleets) Funding available: **Up to \$200,000 per truck**



Requirements:

- ▶ Class 7 or 8 truck with a MY1994-2009 engine or Class 6 truck with a MY1998-2009 engine
- ▶ Replacement trucks must be zero or near-zero emissions
- ▶ Scrap old truck (MY 2006 or older engine)
- ▶ Commit to operate new equipment at least 90% in CA
- ▶ Commit to a project life of 5 years or 500,000 miles for Class 7 or 8, whichever comes first
- ▶ Commit to a project life of 5 years or 300,000 miles for Class 6, whichever comes first
- ▶ Replacement trucks must be purchased and operational prior to a regulatory requirement for that technology or level of emissions control under any adopted rule for in-use trucks

HDD Trucks – Project Options

Truck Replacement (Small Fleets) Funding available: **Up to \$60,000 per truck**

Requirements:



- ▶ Replacement trucks with engines that meet the 2010 emission standard (0.20 g/bhp-hr of NOx)
- ▶ Scrap old truck (MY 2006 or older engine)
- ▶ Commit to operate new equipment at least 90% in CA
- ▶ Commit to a project life of 5 years or 500,000 miles for Class 7 or 8, whichever comes first
- ▶ Commit to a project life of 5 years or 300,000 miles for Class 6, whichever comes first
- ▶ Replacement trucks must be purchased and operational prior to a regulatory requirement for that technology or level of emissions control under any adopted rule for in-use trucks

HDD Trucks – Project Options

Repower (Small Fleets) Funding available: **Up to \$20,000 per truck**

Requirements:

- ▶ Class 7 or 8 truck with a MY2009 or older engine, Class 6 truck with a MY1998-2009 engine
- ▶ New engine must meet MY2010 emissions
- ▶ Scrap the old engine
- ▶ Commit to operate new equipment at least 90% in CA
- ▶ Commit to a project life of 5 years or 500,000 miles Class 7 or 8, whichever comes first
- ▶ Commit to a project life of 5 years or 300,000 miles Class 6, whichever comes first
- ▶ Shall be installed and operational prior to a regulatory requirement for that technology or level of emissions control under any adopted rule for in-use trucks



HDD Trucks – Project Options

Three-Way Truck Transaction Funding available: **Up to \$200,000 per truck**

Requirements:

- Replace an eligible truck that has a MY 2007-2009 engine and a Level 3 PM retrofit (Truck A) with an **advanced technology truck** (Truck C) with an engine that meets 2010 emissions
- Scrap a MY2006 or older diesel truck (Truck B) and replace with Truck A

Please contact the District for more information on this project option



HDD Trucks – Project Options

Truck Electrification Infrastructure

- Commit to 10 years of operation

Electric Charging Station or Hydrogen Fueling Units

- Replace a minimum of 3 electric or fuel cell trucks
- Meet the requirements of advanced technology truck replacements
- Proof of warranty of at least 3 years

Both project options must comply with local permitting

Funding available: Lower of up to 50% of eligible project costs or calculated cost effectiveness value

Please contact the District for more information on this project option



Transportation Refrigeration Units (TRUs) Eligibility and General Requirements

- New equipment must be zero emission.
- No replacement with diesel TRU.
- Majority operation within CA for the past 2 years and/or existing freight facilities within one of CA four trade corridors where trucks/trailers equipped with TRUs congregate
- 100% Compliant Carrier status within ARB's Equipment Registration (ARBER) system



TRU Project Options

Options	Requirements	Funding
Replacement with Zero Emission Transport Refrigerator	<ul style="list-style-type: none"> • Commit to a project life of 5 years or 10,000 hours • Scrap old diesel TRUs 	Up to 80% or \$50,000
Install Electric Infrastructure and Equipment	<ul style="list-style-type: none"> • Install a 460 V 3 Phase electrical infrastructure system • Commit to a project life of 5 years • Ensure usage of the power plugs • Comply with all local permitting requirements 	Up to 50% or \$30,000
Replacement of Cryogenic Transport Refrigerator	<ul style="list-style-type: none"> • Commit to a project life of 5 years or 10,000 hours • Scrap the old diesel TRU(s) 	Up to 80% or \$100,000
Install Cryogenic Infrastructure and Equipment	<ul style="list-style-type: none"> • Commit to a project life of 5 years • Ensure usage of the fueling station • Comply with all local permitting requirements 	Up to 50% or \$100,000

Contract Requirements and Commitments for all Truck Projects

All projects:

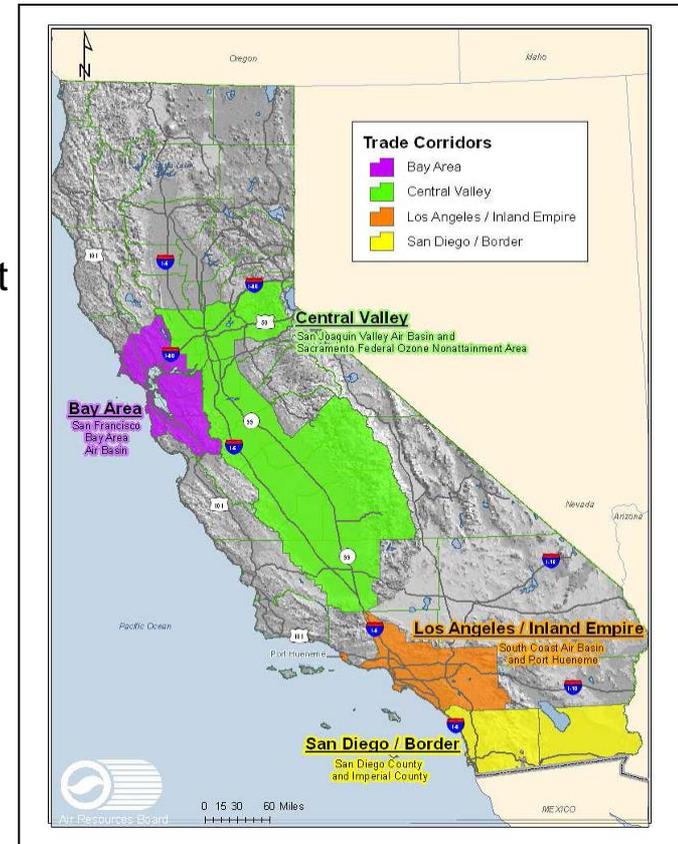
- California base-plated registration or California IRP
- Dual plates only for truck carrying goods across the California/Mexico border
- Commit to at least 50% of travel within the four California trade corridors for the duration of the project life

For Truck Replacement /Repower Projects:

- Commit to at least 90% California-only operation
- Scrap the old truck /engine

For Truck Electrification Infrastructure Projects:

- Commit to 10 years of operation
- Comply with all local permitting requirements



Projects Available for Funding FY2015-16 (Year 5)

Locomotives

**Switcher
Medium Horsepower Locomotive
Line-haul
Emissions Capture and Control System**

Locomotive – Repower, Replacement, Rebuild Project & Funding Available for New Engine or Alternative Technology that Meets US EPA Tier 4 for Lower Emissions Standards

Locomotive System*	Old Engine Tier	Year Project is Operational	Funding
Switcher (1,006-2,300 hp)	Tier 0 through Tier 2	2016	85% up to \$2,125,000
		2017	80% up to \$2,000,000
		2018	75% up to \$1,875,000
Medium Line-Haul Locomotive (2,301 – 4,000 hp)	Tier 0 through Tier 2	2016	85% up to \$2,550,000
		2017	80% up to \$2,400,000
		2018	75% up to \$2,250,000

* Applicants must scrap old equipment, or select to ban old equipment from California and received 20% less grant funding.

Locomotive – Funding Available for New Engine or Alternative Technology that Meets US EPA Tier 4 for Lower Emissions Standards Line-Haul Locomotive (4,001+ hp)

Percent CA Operation*	Old Engine Tier	Year Project is Operational	Funding
90% to 100%	Tier 0 through Tier 2	2016	85% up to \$2,550,000
		2017	80% up to \$2,400,000
		2018	75% up to \$2,250,000
75%	Tier 0 through Tier 2	2016	70% up to \$2,100,000
		2017	65% up to \$1,950,000
		2018	60% up to \$1,800,000
50%	Tier 0 through Tier 2	2016	45% up to \$1,350,000
		2017	40% up to \$1,200,000
		2018	35% up to \$1,050,000
30%	Tier 0 through Tier 2	2016	25% up to \$750,000
		2017	20% up to \$600,000
		2018	15% up to \$450,000

* Percent option is for new equipment to commit to. Applicants must scrap old equipment, or select to ban old equipment from California and received 20% less grant funding.

Locomotive – Repower, Replacement, Rebuild Project & Funding Available for New Engine or Alternative Technology that Meets US EPA Tier 4 for Locomotive Emissions Capture and Control

Up to 80% of eligible costs or a level comparable with a cost-effectiveness of 0.10* for the purchase and installation of an ARB-approved locomotive emission capture and control system (aka hood or bonnet).

* Please see APCD staff if interested in this option.



Locomotive Eligibility and Project Requirements

- Operation or equivalent locomotive horsepower operation in CA for past 2 years
- At least 50% operation or equivalent locomotive horsepower operation within trade corridor(s) for the past 2 years
- Estimated diesel fuel usage of 20,000 gallons per year or greater
- Commit to at least 90% operation (100% for Capture & Control Systems) for the duration of the project life
- Commit to 15 year project life (10 years for Emission Control Systems)



**Projects Available for Funding
FY2015-16 (Year 5)**

Commercial Harbor Craft

**Repower/Replace
Tugboats/Towboats
Crew and Supply Vessels
Other Vessels
Hybrid Power Systems**

Commercial Harbor Craft Eligibility and Project Requirements

- Home port located within CA Trade Corridor
- 2 years of at least 51% operation in CA waters
- Old vessel must have Tier 0, 1, or 2 for repower and replacement projects and Tier 3 or 4 for hybrid projects
- Commit to 5 year project life and California home port operation in the CA trade corridors
- Scrap old engine or vessel



Commercial Harbor Craft – Project Options & Funding Available

Project Type	Harbor Craft	Old Engine Tier	New Engine Tier	Funding
Repower or Replacement	Tugboats/ Towboats, Crew and Supply Vessels)	Tier 0 , Tier 1, or Tier 2	Tier 3 or newer	Up to 50% or \$175/HP
	Other vessels (pilot boats or work boats, high use commercial fishing vessels, etc.)	Tier 0 , Tier 1, or Tier 2	Tier 3 or newer	Up to 85% or \$300/HP
Repower or Replacement	Tugboats/ Towboats, and Other vessels	Tier 0 , Tier 1, or Tier 2	Tier 4	Up to 85% or \$450/HP
Retrofit or Replacement with Hybrid Power System	Tugboat, Towboat, or Crew Supply Vessel (Work or Pilot Boat, or High Use Commercial Fishing Vessel)	Tier 2 or Tier 3	Hybrid System that includes a Tier 3 (or better) engine	Up to 85% or \$380/HP

**Projects Available for Funding
FY2015-16 (Year 5)**

Cargo Handling Equipment

**Yard Truck Conversion
Yard Truck Replacement/Infrastructure
Forklift/Lift Replacement**

Cargo Handling Equipment - Project Options

- Repower or replacement of rubber-tired gantry cranes with a zero emission power system (i.e. no diesel repowers/replacements)
- Yard truck conversion/replacement of diesel-powered to electric
- Yard truck replacement of diesel-powered to fuel cell
- Multi-unit battery charger with conversion of 3 or more trucks
- Forklift/Lift replacement for electric or fuel cell



Cargo Handling Project Options

Options*	Description	Funding
RTG Crane Conversion	Convert diesel to zero emissions power system	Up to 50% or \$500,000
Yard Truck Conversion	Convert diesel powered truck with electric powered truck	Up to 80% or \$80,000/truck
Yard Truck Replacement Electric	Replace diesel powered truck with electric powered truck	Up to 80% or \$100,000
Yard Truck Replacement Fuel Cell	Replace diesel powered truck with fuel cell powered truck	Up to 80% or \$200,000
Multi-unit Battery Charger	Minimum 3 yard trucks conversion or replacement.	Up to 50% or \$35,000
Forklift Replacement of 3 diesel forklifts with 3 Class 1 electric powered forklift	Lift Capacity 3,000 to 8,000	Up to 50% or \$45,000
	Lift Capacity 8,001 to 12,000	Up to 50% or \$55,000

* Additional requirements apply and vary by project option. Please contact APCD staff for more information.

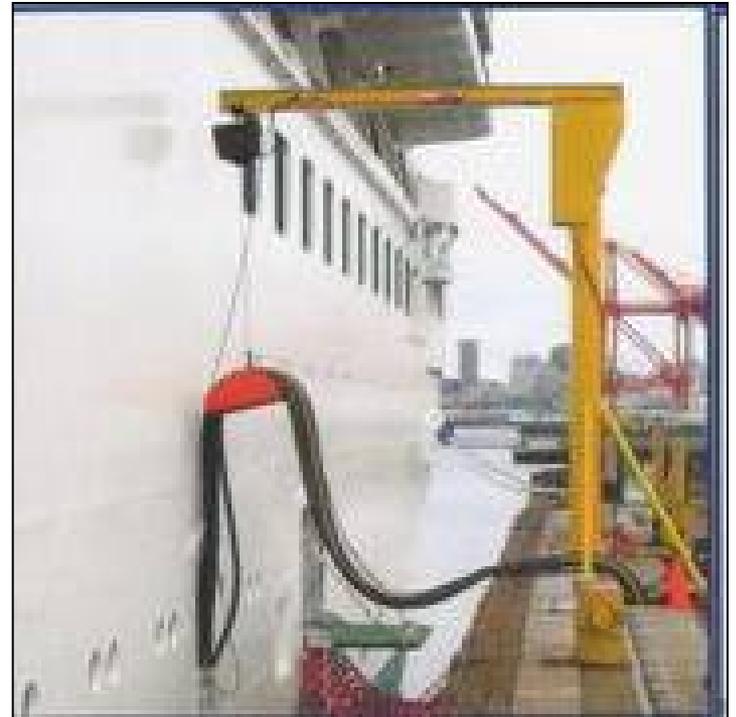
Projects Available for Funding FY2015-16 (Year 5)

Ships at Berth

Category limited to cargo ships at berth
and seaport terminals that serve them
(i.e. Port of San Diego)

Ships at Berth - Project Options

- Grid-based power projects
- Non-grid based power projects
- Ship-based emissions capture and control systems
- If you have a project that you may be considering for this category, please contact APCD staff for more information



SDAPCD Proposal For Application

- Trucks and TRU funding will be the majority of the funding, and funding will be allocated for other project categories if there is interest
- No plans to apply for funding for cargo handling equipment, locomotives or commercial harbor craft unless there is local interest
- Please submit comments for what project categories we should apply for



Timeline for FY2015-16 (Year 5) Funding



- August 7, 2015
 - SDAPCD application due to ARB
- September 1, 2015
 - Begin statewide project solicitation

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For additional information on the Proposition 1B GMERP Program,

<http://www.arb.ca.gov/bonds/gmbond/gmbond.htm>

Questions/Comments?

